DOCUMENT RESUME

ED 080 682 VT 020 893

AUTHOR	McCaleb, Omer
TITLE	Project VIGOR: Vocational Cluster Education, Integrated and Articulated Grades 1 through 14 with Guidance Services, Occupational Exploration and Work Experiences Relevant to General Education. Final Report.
INSTITUTION	David Douglas Public Schools, Portland, Oreg.
SPONS AGENCY	Bureau of Adult, Vocational, and Technical Education (DHEW/OE), Washington, D.C.
PUB DATE	30 Jun 73
GRANT	OEG-0-70-5187(361)
NOTE	157p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	*Articulation (Program); *Career Education; *Cluster Grouping; *Curriculum Development; *Developmental Programs; Occupational Clusters; Program Evaluation; Vocational Counseling; Work Experience Programs
IDENTIFIERS	Oregon; *Project VIGOR

ABSTRACT

Through Project VIGOR, the David Douglas Public School System in Portland, Oregon addressed itself to the objective of changing a conventional academically oriented general education system into one whose curriculum reflected the needs of all students from the primary through the secondary grades and including post-high school contact and placement assistance, where possible. Cluster courses and attendant work experience programs, together with articulation between grade levels and departments, were important growth areas in the project. Accomplishments of the project were largely in terms of an awareness of career education as part of the general curriculum. Project VIGOR as a guidance-oriented curriculum project whose visibility existed through changes in student behavior was considered successful. Appendixes contain a bibliography, cluster exploration at Grade 9, evaluation report, preliminary follow-up of 1972 seniors, programs, student job center, and an example of articulation activity. Related documents are available as ED 058 418 and ED 067 511. (Author/MF)

FINAL REPORT

PROJECT VIGOR

OREGON'S EXEMPLARY PROGRAM CAREER EDUCATION

July 1, 1970 - June 30, 1973

DAVID DOUGLAS SCHOOL DISTRICT
2900 S.E. 122nd Avenue
Portland, Oregon 97236

Dr. Howard F. Horner, Superintendent
Dr. Omer K. McCaleb, Director

FINAL REPORT

Project No. 0-361-0055
Contract No. OEG-0-70-5187(361)

PROJECT VIGOR: Vocational Cluster Education, Integrated and Articulated Grades 1 through 14 with Guidance Services, Occupational Exploration and Work Experience Relevant to General Education

Exemplary Project in Vocation Education
Conducted Under
Part D of Public Law 90-576

Omer McCaleb
David Douglas Public Schools
1500 S. E. 130th Avenue
Portland, Oregon 97233

June 30, 1973

FINAL REPORT

Project No. 0-361-0055
Contract No. OEG-0-70-5187(361)

PROJECT VIGOR: Vocational Cluster Education, Integrated and Articulated Grades 1 through 14 with Guidance Services, Occupational Exploration and Work Experiences Relevant to General Education

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Omer McCaleb
David Douglas Public Schools
1500 S. E. 130th Avenue
Portland, Oregon 97233

June 30, 1973

TABLE OF CONTENTS

SUMMARY

A. Time Period Covered

The final report for Project VIGOR covers a period from July 1, 1970 to June 30, 1973.

B. Goals and Objectives of Project VIGOR

Through Project VIGOR the David Douglas Public School System is addressing itself to the objective of changing a conventional academically oriented general education school system into one whose curriculum reflects the needs of all students regardless of the level of entry into their chosen vocation. Simply stated, the Project goals for career education in the David Douglas District are as follows:

PRIMARY - Every child will see the world of work as a part of his developing self and will learn some career classifications (jobs) by name.

INTERMEDIATE - Every child will be able to identify the relationship between his school courses and the world of work and will learn to group employment classification into job families. Every child will see the world of work as a significant part of his developing self and will learn the names of many jobs.

MIDDLE - Every student will be able to relate a knowledge of his own characteristics to known occupational requirements and will be able to locate detailed information about specific job requirements.

JUNIOR - Every student will explore chosen occupations and select courses supportive to his broad career field choice. Each student will demonstrate a knowledge of the relationship between his developing education and his emerging vocational being.

SENIOR - Every student will elect a combination of courses specifically designed to meet needs of students having chosen his career area. Every cluster student seeking entry level skills will develop those qualities necessary to obtain employment in his chosen occupational area.

POST HIGH SCHOOL - The school will provide follow-up contact service for former Douglas students and placement assistance, where possible, for youth of this community. Compatibility of programs for students advancing from David Douglas to an institution of higher education will be maintained.

Each of the goals applies to all successive grade levels and is intended to be sufficiently flexible to apply to students' individual characteristics and levels of maturation.

The Project is intended to introduce significant concepts of career education at all grade levels within an existing public school system without traumatically upsetting those existing teaching/learning processes which have already been established as basic to general education.

We see career education as a framework for building tomorrow's society today.

We have defined career education as that portion of general education which is purposefully designed to provide an environment for developing attitudes by which an individual approaches decisions concerning services which he will exchange for the goods and services that he will receive from his community and vocational education as that part of education which prepares a person for a given area of employment. Insomuch as our entire school curriculum is relevant to general education, it must also specifically and deliberately provide such environment as best meets the developmental needs of each individual in terms of career education goals.

C. Procedures Followed

A major impetus to curriculum change has been the organization of two elementary (five buildings or schools each) assistance areas. Each area is coordinated by an elementary principal that reports directly to the VIGOR office. We have seen extensive program development and activity within nearly every elementary school.

Another area of concentration has been the Cruise or cluster exploration at the ninth grade (being moved to the middle school area). See appendix B. The Cruise program allowed each ninth grade student to explore each of the twelve cluster areas. This exploration includes occupational information, employment possibilities, training requirements and a hands-on-exposure to actual activities in each cluster area.

Project VIGOR has had two major directions of thrust. The first and most visible of which is the institution of cluster courses as defined in the Oregon Board's Plan for Career Education entitled The Oregon Way. These cluster courses have been taken into the high school system within their most closely related existing high school departments; for example, the model office, or the clerical cluster, is a functioning part of the business education department of the high school. Additional schedule changes make possible the attendant work experience programs accompanying the cluster courses.

Departments which have been most noticeably affected by the institution of cluster courses so far have included business education, homemaking, industrial education and science.

During the early stages of Project VIGOR we saw some reduction in the size of classes in courses related to the clusters, followed later by an increase in the enrollment of those courses within a department which was supportive and pre-requisite to admission of students to the clusters. Eventually we expect to see a general increase in enrollment in those departments which are identified as having several of the vocational clusters, as the effect of the awareness and exploratory programs and the counseling and orientation procedures become evident in more extensive student planning for their high school courses.

Dr. McCaleb has maintained close contact with principals from the elementary, middle and high school areas respectfully. Articulation between grade levels and departments is seen as imperative to continuous growth of the career education concepts. There is continual evidence of improvement in this area.

Many of the buildings are developing career interest programs which are elective on the part of students but which offer a broad range of exposure to several aspects of career fields, including an opportunity for hands-on experiences with the various media available for awareness and exploratory activities on the part of primary and intermediate students. Leadership in these programs is generally assumed by a school counselor. The middle school, or seventh and eighth grade, program have thus far focused on exploratory experiences for students relative to themselves as people developing a greater understanding of their own capacities, interests, skills, motivation, abilities, and job requirements in various occupational fields.

College courses in exploratory education have been offered to all interested staff members, with a major emphasis being placed on the language arts-social studies block teachers who are taking responsibility for presenting a course to all students in occupational exploration and self-understanding. These, too, are under the general supervision of the counselors in those buildings.

D. Results and Accomplishments

The accomplishments of Project VIGOR occur largely in terms of an awareness of career education as a part of the general curriculum. This awareness has been stimulated within the community by news releases and activities of the advisory committees. The professional staff has been oriented by district in-service workshops, faculty meetings, individual contacts, and special projects described throughout the body of this report.

There were 142 students enrolled in four cluster classes the first year of the project, 534 students were enrolled in eight cluster classes the second year. The third year of the project saw twelve cluster classes with 520 students plus 316 additional students enrolled in other vocationally approved courses bringing the third year total to 836 which is 58% of the 1400 plus junior and senior students. This year's graduating class boasts four 4.0 students, two of which are in the Food Service cluster. The top 10% of the graduating class of 591 contains seven cluster class students.

Middle school programs in self awareness and occupational exploration have involved 1513 students, and all of the 3945 elementary students have had some exposure to career awareness.

Seventeen advisory committees now involve 98 lay community members, 28 certificated staff members and 16 students. The committees have proven such a valuable addition to the planning and implementation of Project VIGOR that Lincoln Park grade school and Ventura Park grade school have in addition organized very active advisory committees for their awareness programs.

Two career awareness inservice workshops were started on March 26, 1973. Each involved the entire staff of an elementary school in planning a year long activity for students, faculty and community.

E. Evaluation

Evaluation has been an ongoing operation within the Project and a responsibility of the Project administration. Third party evaluation is the contracted responsibility of the Oregon Board of Education Research Coordination Unit. Copies of the O.B.E. R.C.U. final evaluation will be attached as appendix C to those copies of this report going to those governmental agencies under whose supervision Project VIGOR operates.

Appendix D is the proposal submitted by O.B.E. R.C. U. for evaluating Project VIGOR for the fiscal year July 1, 1972- June 30, 1973 and for the final evaluation. This appendix is included to give you an overview of the services performed by the third party evaluator.

Mrs. Jana Jennings has been working with the senior class of 1972 and their present activities and opinions as to how relevent their high school education has been to their present activities. The graduating class of 1973 will be included in the follow-up program as will succeeding classes.

A write up on the initial survey given the senior class may be found in appendix E.

F. Conclusions

Project VIGOR is a guidance-oriented curriculum project whose visibility exists through changes in student behavior. We are trying to change the entire curriculum in those ways which will make most likely those student experiences which result in a total alumni capable of engagir effectively with the world of work on a continuing basis.

In terms of the above stated objective, the Director of Project VIGOR considers the project successful.

Course content, teaching methodology, staffing patterns, personnel interaction, materials and equipment are coordinated into a total school curriculum which might pass as "conventional" until examined in terms of post high school results.

Implications of this Project should favor an educational design appropriate for implementation by any other school system with similar aspirations for its graduates without imposing an expensive or disruptive reorganization program.

The Project management recommends a continuation of established direction, reinforced by additional staff orientation and involvement, and increased articulation with total community including students, staff, administration, parents, taxpayers, business and industry representatives.

End of Summary of the Report.

A. PROJECT VIGOR PROBLEM AREA

It is a fact that large sums of money are being spent in public school systems which provide quality education experiences for only one-half of our students. The emphasis on the teaching of skills and knowledges which prepare students for continued academic study only is having a tragic effect on student attendance, motivation to succeed in school, students dropping out of school, and their insertion into the work force without salable skills or viable work attitudes. With this serious lack of commitment to their present education it is small wonder they have developed a resistance to post high school training.

In his study of Perceptions of Non-College-Bound Vocationally-Oriented High School Graduates, Betz coordinated in-depth structured interviews of 309 high school graduates judged to be "non-college bound" exploring perceptions of their (1) educational experiences, (2) vocational experiences, (3) self-concepts and (4) family relationships. Interview data was compiled two years after high school graduation from subjects residing in urban "rurban", and rural environments in four mid-central states. Content analysis of written reports of subjects' perceptions resulted in four major conclusions: (1) employment bound, non-college oriented students perceive the school, the counselors and other personnel within the school as "favoring" the college bound student, (2) counselors were not perceived as being "helpful" in assisting employment bound youth to satisfactory vocational decisions, (3) subjects were unable to articulate "meaningful" concepts of self, and (4) generally, they did not perceive parents as being at all "helpful in resolving personal, educational, and vocational problems.[1]

Such students react to this irrelevancy by "dropping out" or by being a "drop in", a student moving aimlessly through a general curriculum with little motivation or purpose.

The problem is more specifically addressed in the following:

--The American society is undergoing such dramatic changes that we have a new environment in which we must live and work.

--The accelerating rate of social and technological change challenges the effectiveness of our traditional social arrangements and institutions, including--if not in particular--our system of public education.

--Education and work are now directly related for virtually all individuals, not just those who seek higher education and careers in the professions.

--Manpower training needs in a technological society can be met only through education.

---

[1] Perceptions of Non-College-Bound Vocationally-Oriented High School Graduates, by Robert L. Betz, and others, Western Michigan University, Kalamazoo, Publishing Date 1968, 17 p.

--If education is to be made relevant to the lives of all it claims to serve, occupational education must become an integral part of total education.

--In such a setting, the American education system must provide:

*education that is socially and economically relevant to the needs of the individual and to the manpower requirements of the nation;

*occupational education for youth who will be entering the labor force and for adults who seek to improve their occupational competencies or learn new skills;

*a broad scope of occupational education accessible to all students in all grades and in a variety of educational settings;

*quality instructional programs which are suited to the occupational goals of people, and to occupational requirements;

*comprehensive curriculums which relate both general and occupational education to the occupational objectives of students;

*maximum utilization of all personnel--administrative, supervisory, teacher education, research, and guidance--in the achievement of occupational education objectives;

*systematic and continuing evaluation of occupational education to assure its relevance to a dynamic and changing world of work;

*continuous guidance of students to provide for proper placement in occupational education programs.[1]

If we have accurately read the conditions and syptoms of our times and if we are current in our thinking, the need to offer vocational education in our secondary schools appears obvious. At least it is obvious to the Federal Government (355 million dollars, 1968-69), to the Governor of the State, to the State Superintendent of Instruction, and to the majority of the educators in the David Douglas School District.

Vocational Education is not a bandwagon--it is an opportunity--educationally the need for this extension of our curriculum is well documented. The most powerful issue in learning is the student self-concept--the way in which he sees himself as a person and as a student. Herein lies potential answers to the eternal questions of motivation, self-discipline, goal setting, self-actualization. We know a great deal about the self-concept; we've done less to improve it.

---

[1] The Challenge of Change, The Role of Occupational Education in Oregon; State Advisory Council for Vocational Education, 1968, p. 4,5

A person's self-concept is basically developed in three areas:

a. Modeling - those adult figures (parents, teachers, etc.) whom the youngster admires or after whom he would like to pattern himself.

b. Interaction with environment - the day-by-day experiences, the successes and failures a student has that help him mold an image of himself, either positive or negative.

c. Coping Skills - the degree of understanding the youngster has of his ability to cope with society and to become a successful, contributing member of his community.

It is in this last area that the school should play the most important role. A student needs to see the real application that his education has to his future--whether it will better enable him to cope with the future. The knowledge that he possesses skills which will be needed and sought after, even paid for by the community, can be a powerful influence on the student's concept of himself and his ultimate success.

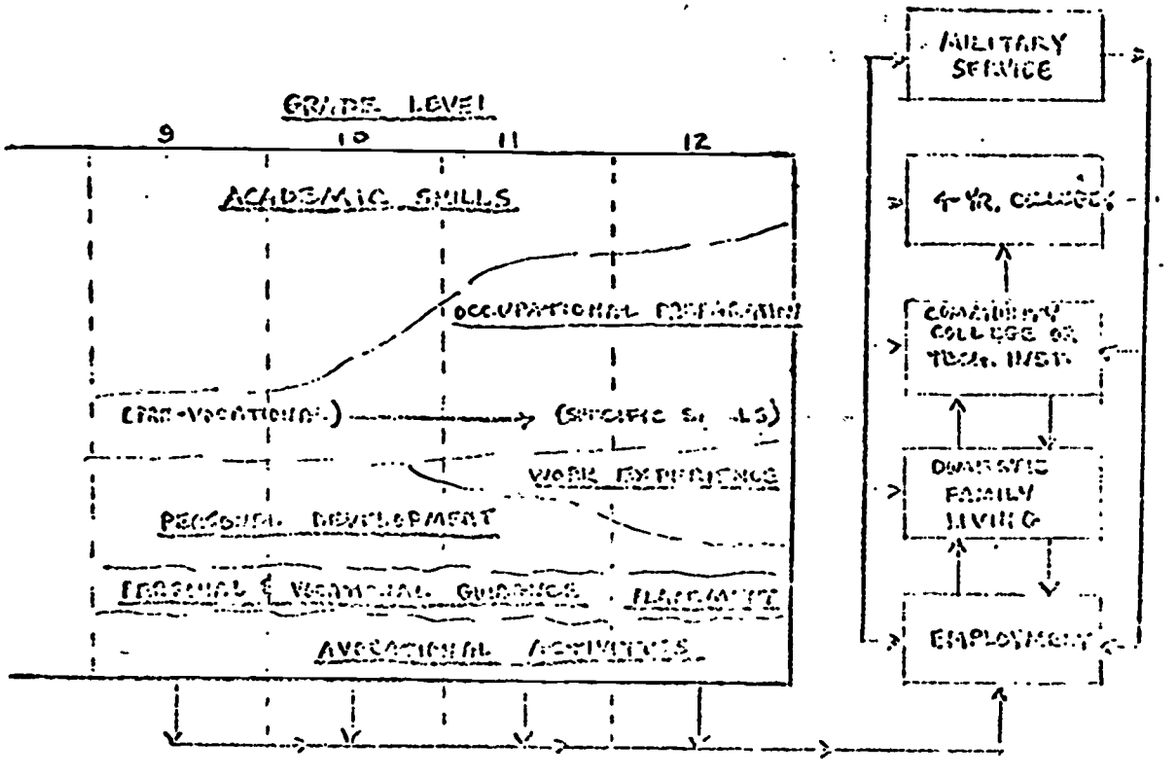
We would present the case that as long as the school curriculum remains oriented to the written word and the college bound student, transfer of learning is discouraged.

The ultimate dream of providing education for all of the children of all the people can be realized. The question has been asked, "Should the comprehensive high school offer vocational education?" An answer might be another question, "Is a school comprehensive unless it offers vocational education?"

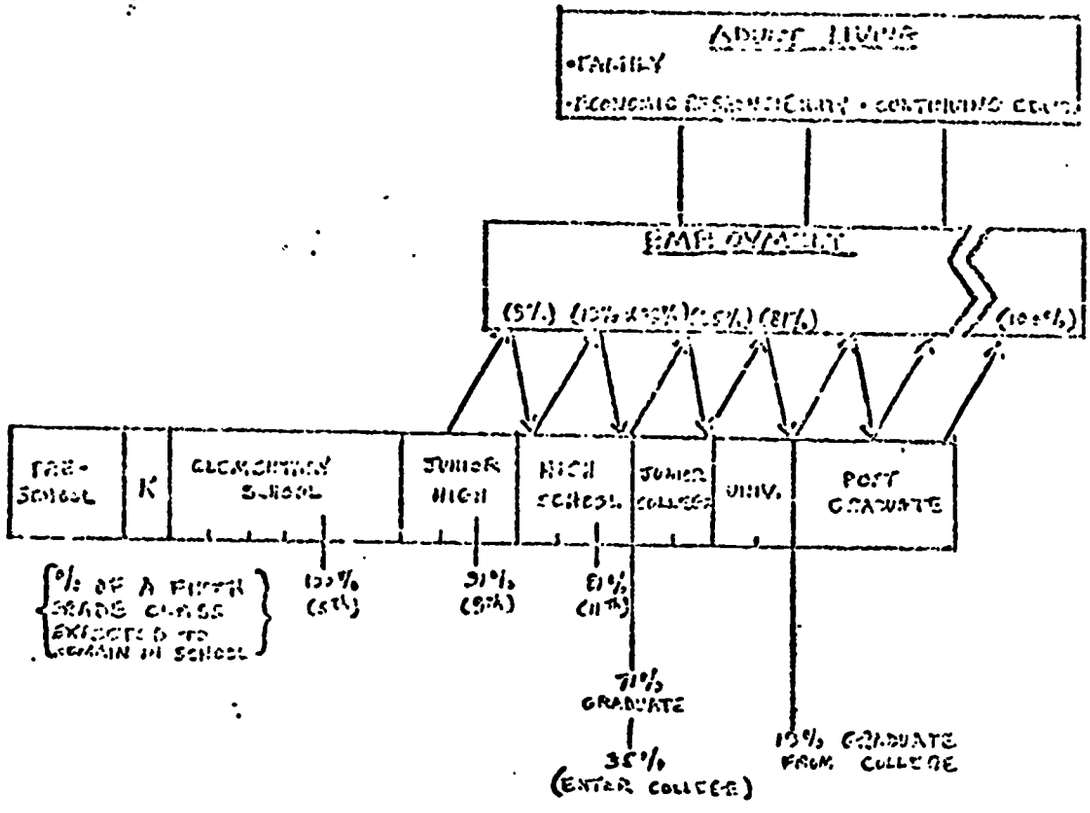
Most experts have come to agree with a position taken at David Douglas years ago--education is total for the total person and no separation of vocational education from the general curriculum can be tolerated. General curricular offerings such as math, science, and English should be taught as they relate to the vocational goals of the student.

The comprehensive high school can provide only one door of entry and five of exit. All students matriculate from the elementary program, but some slip out other doors at the opposite end. Four-year college preparation, community college or techincal training, immediate job placement, military service, or domestic home life are the only acceptable paths after graduation. To drop out before then or to aimlessly move through unproductive programs can no longer be accepted by the community.

These doorways, however, should not hold individual levels of status--each is a positive goal for young people and the total curriculum should prepare young people for them. A program for any youngster ought to be as follows: (See page 9)



On a national level student matriculation parallels the following chart:*



*Designing an Organic Curriculum, Robert M. Morgan and David S. Bushness, Bureau of Research, U.S. Office of Education, November, 1966

From these figures the role of the comprehensive school becomes more clear. If only 19% of the total student population is to complete a four-year college program, the school program must be broad enough to provide a relevant experience for all other students.

Student motivation at the present time is an abstract thing. We ask them to take math, science, social studies, and English with the promise that it will be beneficial in their future. For the college-bound student these skills and concepts will be used and he knows it.

Motivation, the understanding of the effect of today's experience on his future, is easy for him. But what of the student who cannot see the relationship of these courses to his interest and future in auto mechanics, food processing, horticulture, and secretarial service? For him there must be vocational relevance; the relevance that the general curriculum has to the vocational goals of youngsters.

The total thrust of this program is to make public education central to a student movement from formal education to earning a living.

The school now becomes a center of involvement with public agencies committed to manpower placement, development and training. These relationships will effect the conditions and learning experiences in all aspects of a student's educational program.

This thrust will tell students and parents in no uncertain terms that occupational aspirations are not only appropriate but necessary and that opportunities are present. We agree that, "at the very heart of our problem is a national attitude that says vocational education is designed for somebody else's children. This attitude is shared by businessmen, labor leaders, administrators, teachers, parents, students. We are all guilty. We have promoted the idea that the only good education is an education capped by four years of college. This idea, transmitted by our values, our aspirations and our silent support, is snobbish, undemocratic, and a revelation of why schools fail so many students."[1]

Such a program must consider students of all backgrounds, abilities, aspirations, race heritage, and physical characteristics. It must anticipate their needs and provide reasonable individual experience. This can only be accomplished through coordination of all agencies and resources supported by strong guidance practices.

Project VIGOR emphasizes the concurrent development and implementation of several innovations. The innovative and exemplary thrust is demonstrated in the way several concepts are implemented in the framework of existing public schools.

All of the materials and programs to be implemented have been developed over an extensive period of time, and have been tested. An intricate network of Federal, state and local funds resulted in authentic research and

---

[1] First Annual Report of the National Advisory Council on Vocational Education.

development. Our efforts will provide an interrelated program demonstrating a model worthy of consideration by every other public school system in the country.

The components of the program are organized in units of 10. Sub activities can be noted in concurrent tasks. (Example, Component 10 is Vocational Exploration and tasks within the component are 12 In-service, 14 Materials, 17 Curriculum, etc.)

Though some of the components by name have been employed across the country for years (Example, work experience) current directions and research in these fields have been noted in the development of this project.

Component 10 - Vocational Exploration

A course in vocational exploration is being taught to all 7th and 8th grade students -- a model for such a course is SUTOE: Self Understanding Through Occupational Exploration. "SUTOE" is a course developed under the leadership of the Community Colleges and Vocational Education Division and Guidance Services Section, Oregon Board of Education, in cooperation with the Division of Continuing Education and local school districts. SUTOE provides a broad scale classroom approach to assisting students with educational and career planning via self appraisal and examination of jobs in relation to the data-people-things conceptual framework of the D.O.T. (Dictionary of Occupational Titles). Occupational, general education, and guidance programs are linked together in this effort to enable students to take greater advantage of available opportunities and to ascertain and reach career goals. The course consists of ten units, each of which has several identified behavioral objectives. A wide variety of in-class and out-of-class suggestions for implementation are offered under each objective.

The SUTOE course forms the backbone of the educational exploration program but other materials and programs are being employed.

A special exploratory work experience program has been funded through exemplary monies allocated by the U.S. Office of Education, Department of Health, Education and Welfare, to the Oregon Board of Education for exemplary projects. An outline of that program will be found in Appendix B.

Underlying basic assumptions for vocational exploration are:

1. All students should have an opportunity to explore the broad total of the world of work.

2. All students should have opportunity to develop a self concept.

3. All students should have experiences in meaningful decision making and in accepting responsibility for their own decisions.

---

[1] Varenhorst, Barbara R., Innovative Tool for Group Counseling, The Life Career Game, The School Counselor, 1968, p. 15.

4. The junior high school years are a time of high potential for developing an awareness of relevant factors to be considered in decision making.

5. Career choice and its implementation is a developmental process.

6. A challenging experience-centered course that stimulates creative individualism is valid for junior high school students in that they become more aware of both strengths and weaknesses, and reflect more positive interests.

7. A program that provides opportunity for acquiring self-understanding and knowledge of the world of work, in combination, will contribute much toward helping youth prepare for their place in a complex socio-economic world of reality.

8. More adequate educational goals and tentative career choices may be established by students, as a result of the experiences provided through an organized classroom approach."[1]

Such assumptions are supported by the Final Report of the Education Improvement Advisory Commission, State of Oregon, 1966, which stated: "Groups and individual guidance about occupations should begin during the junior high school years to facilitate wise occupational choice by assuring that every youngster becomes familiar with the different types of work that exist."[2] Draper, Feldman, and Venn* also support this philosophy.[3,4,5]

We are in substantial support of further findings of Mrs. Nancy Sloan under contract CG 4000002 with the U.S. Office of Education, entitled Orientation Approaches to Increase Student Awareness of Occupational Options, wherein it is stated:

Why is Such Orientation Needed?

1. A desired orientation shows how work reflects one's integration into the community. Children need to understand how adults achieve a place in society and develop a life style.

---

1 Teacher's Guide to: Self Understanding Through Occupational Exploration (SUTOE) State Department of Education, Division of Community Colleges and Vocational Education.

2 Final Report of the Education Improvement Advisory Commission, State of Oregon, 1966, p. 61.

3 Draper, Dale C., editor of NASSP Publication, Educating for Work, and Staff Member of San Francisco State College.

4 Feldman, Marvin J., Program Officer of the Ford Foundation and author of Making Education Relevant.

5 Venn, Grant, editor of Man, Education, and Work and Associate Commissioner of Adult and Vocational Education, U.S. Office of Education.

2. Through occupational orientation, children develop a personal sense of their present and future worth. They become aware of the complexities and possibilities within the world.

3. An occupational orientation program can help a student perceive himself and the options open to him more accurately. Career choice involves an appraisal of self matched to knowledge about occupations. Research shows that the most realistic career choices are made by those with the greatest exposure to valid information about work and the greatest opportunity for self evaluation.

4. Our present culture deprives most youth of prevocational experiences, yet class-associated attitudes about work and careers are acquiring in early years. Attitudes and concepts are influenced by family, teachers, and other role models. Such concepts may be based upon lack of experience, partial information, or misinformation.

5. Well-planned occupational services in the elementary school broadens the range of possible choices at all stages. Students are asked to choose courses of study or make other educational decisions before most of them are aware of the career opportunities available.

6. A background of accurate information and an awareness of options helps avoid an occupational choice made because of immediate circumstances. The decision-making becomes a process in which some career areas are rejected as others are selected as possibilities.

7. Research indicates that the aspiration of a student often differs from the career he actually expects to choose. A wide range of careers may be acceptable and satisfying to him, but he does not consider them as his aspirations.

An occupational outlook program which begins in the early years and continues through high school affords the individual opportunity to appraise himself, to recognize the many career choices available, and to understand the process and end-result of occupational decision-making.[1]

We are especially sensitive to the findings of Robert L. Darcy under a grant from the U.S. Office who reported on An Experimental Junior High School Course in Occupational Opportunities and Labor Market Processes, Final Report. We quote from his conclusion: ". . . Students enrolled in the experimental course reflected more interest in school and a lower dropout rate."[2]

---

[1] Orientation Approaches to Increase Student Awareness of Occupational Options, U.S. Office of Education, Mrs. Nancy Sloan, CG400002.

[2] ED 022056 Darcy, Robert L., An Experimental Junior High School Course in Occupational Opportunities and Labor Market Processes. Final Report, Ohio University, Athens Center for Economic Education.

In a speech given to the Ohio School Counselors Association, January of 1969, Dr. Richard C. Nelson emphasizes the need to"open new vistas to children through career explorations" and more reasons for offering such experiences are offered as well as nine additional points as to how this exploration should be conducted. In summary they are:

1. Exploring careers help children develop a personal sense of present and future worth.

2. Exploring careers helps children to develop a feeling of place their society.

3. Exploring careers helps children see how adults achieve the place they have.

4. Exploring careers injects the elementary school into a meaningful on-going process.

5. Exploring careers helps children see the value and significance of all honest work.

6. Exploring careers helps children develop enthusiasm about the whole prospect of work as a way of life.

7. Exploring careers helps counteract the physical and/or psychological absence of male working role models upon attitudes toward work.

8. Exploring careers helps children develop a concept of life as a reality extending through several interrelated-and-interdependent phases.

9. Exploring careers with elementary school children is consistent with good learning theory.

Exploration is successful when:

1. Effective career exploration is action oriented.

2. Effective career exploration emerges from questions important to children.

3. Effective career exploration at the elementary school level stresses wide-ranging exploration and minimizes choice making.

4. Effective career exploration is not given letter grades on report cards and evaluation is kept to an absolute minimum.

5. Effective career exploration starts with the jobs and positions held by parents of the children involved.

6. Effective career exploration expands outward from parents' jobs and from other jobs in the immediate vicinity to include jobs of relevance in the city, state, and nation.

7. Effective career exploration brings children into meaningful contact with a variety of workers at their jobs.

8. Effective career exploration relies more on occupational briefs prepared by children than upon commercial materials.

9. Effective career exploration is not overweighted in favor of amassing and digesting occupational information.[1]

Component 20 - Guidance

Guidance has always been an integral part of any vocational program. Project VIGOR emphasizes the articulation of guidance efforts, grades 1-14. Vocational exploration at the early years, the follow-up program, provision of vocational information, in-service of teachers and counselors, and group and individual efforts with students will all have guidance implications and characteristics.

We have reviewed the summary and most of the research cited in Intensive High School Occupational Guidance Approaches for Initial Work and Technical School Placement, compiled by Juliet V. Miller, under contract to the U.S. Office of Education and find that the Summary of Guidance Services needed for youths speak directly to much of our program. For instance:

1. "These youth need early vocational exploration experiences which will help them understand themselves and the world of work" is a direct reference to our Component 10-Vocational Exploration, previously reviewed.

2. "These youth need the opportunity to test occupational realities before they make occupational decisions. Programs should be developed which enable the student to engage in real or simulated work experience" speaks directly to our Component 50 - Work Experience.

3. "The total school experience of these students needs to be made more occupationally relevant. One guidance function can be to provide feedback to other members of the school staff which can facilitate curriculum revision" will be the direct thrust of Component 30 - General Curriculum (and its vocational relevancy).[2]

We are cognizant of the report of Task Force II, Articulation and Coordination of Occupational Preparatory Curriculum From the High School Through the Community College, a study done in this state as a part of the Occupational Preparatory Curriculum Articulation -- Coordination Project undertaken by the Oregon Board of Education, Oregon State Systems of Higher Education, Oregon Department of Employment, and others.

---

1 Nelson, Dr. Richard C., Opening New Vistas to Children Through Career Exploration, Purdue University.

2 Intensive High School Occupational Guidance Approaches for Initial Work and Technical School Placement, U.S. Office of Education, Juliet V. Miller, CG400003.

Guidance considerations are described as follows:

"Students, educational administrators and teachers must realize that occupational education is not a one-shot preparatory route, but a life-long process."

"Counseling personnel must be aware and make it their mission to prepare young people to cope with the profound changes they are certain to encounter during their lifetime."

Those in guidance and counseling must consider where we are not and what short run changes are needed to equip our young people to cope with the world in which they will live. But anything they attempt as a present solution should not detract from the infinitely more difficult and more basic task of designing new programs which will transform our schools into institutions capable of preparing students to live in a complex technological society. And, while they are at it, they should not lose sight of the fact that technology will bring with it more leisure, therefore guidance must:

1. Prepare young people to use this leisure wisely and creatively, and

2. Apply influence on those concerned specifically with curriculum articulation to produce a well-rounded program which orients the student for the work world, balanced with readiness to enjoy or wisely utilize leisure time or pursue avocational interests.

Also, in considering the design of a sound program of vocational education, they need to think about some interrelated problems:

1. How can we make sure that every student receives the basic education necessary for occupational preparation?

2. How can we provide each youngster with the information and experiences that he needs in order to make intelligent decisions about his life's work?

3. How can we provide occupational education that is appropriate to the needs, interests, and abilities of young people so that we can enter gainful employment, progress on the job, and cope with changing technology effectively?[1]

A counselor needs to be aware of his own bias and/or limitations of experience which affect the impressions or climate he may create in the guidance program.

---

1 Articulation and Coordination of Occupational Preparatory Curriculum From High School Through the Community College. Report of Task Force II, 1969, Dale Parnell, Superintendent of Public Instruction, Oregon Board of Education, Salem, Oregon.

Component 30 - General Curriculum

An innovation with great promise has to do with this component.

Each department of the central "general" curriculum, that is, math, science, social studies, English, will design and write experiences which make these courses "vocationally relevant". After specific in-service experiences (presentations by articulate leaders in the business and labor fields, exploratory visits to industrial complexes, interviews with ex-students, review of literature, and material available), courses, which through their selection of materials and experiences will relate to vocational applications, will be written. These courses will stress relationships to the world of work; relationships to student identified vocational goals; relationships to the skills taught in the v cational cluster and related courses; and relationships to the civic and national role both labor and industry play.

Two such courses have already been developed at David Douglas High School. The district felt so strongly about the potential of this relevancy that it supported in-service and staff development of Project Math, a math class for ninth and tenth graders, and English for Vocations, an elective English course for eleventh and twelfth graders (all 11th and 12th English selections are elective semester courses, although the equivalent of two full years must be completed).

Project Math - This course was first initiated with Title I ESEA funds and is made up of packages or 'projects'. Each project has as its content vocational experiences of interest to the students selecting them. Each also demands utilization of all of the math concepts taught in more traditional courses. After three years, all evaluations are positive. Student achievement is up, transfer of concepts to other problem solving areas is up, student attendance is up, and students are moving to other math electives, whereby previously they dropped further math study.

English for Vocations - Concern as to whether students would elect this course was quickly dispelled on the first year it was offered. The basic thrust is to develop language skills (clarity in writing, reading for retention and detail, speaking positively with clarity, and listening for instruction) as they relate to vocational interests and requirements. It provides for student use of language in interviews, technical writing, technical reading and others. Emphasis is on such skills as directness, brevity and coherence. Consultants from the Oregon Board of Education provide valuable assistance to our staff in all disciplines.

Both courses, and other being developed in other disciplines, maintain standards of accountability as determined by student performance. The concepts and tool skills are of such breadth so as to allow a student the opportunity to move into and out of these experiences and still have many doors open to him as a graduate. The fact is, relevancy of such experiences will retain students in the academic sequences for a longer period whereas presently too many students complete their one year requirement in these areas and then move away from further study.

Every teacher in the district has participated in the preparation of a list of vocational applications for specific concepts presented within that teacher's discipline and grade level. These applications are designed to demonstrate the relevancy of each subject to the studert's future life of work without interrupting the instructional format which is most comfortable to the teacher.

The second portion of this component is the organization of elective courses in the areas of home economics, industrial education, business education and others. Such courses would be analyzed as they relate to vocational cluster curriculum and will be recommended to students in patterns which relate to their cluster interest. Each of these courses will relate to more than one cluster and are not to be confused in any way with "tracks". We are proposing a guidance strategy which will allow for a smooth transition from general to specific vocational training. Students will be encouraged to move into and out of such patterns as their interests and goals change. We agree with the program recommendations of the First Annual Report of the National Advisory Council on Vocational Education which says: "Within high schools the student should have multiple choices. A separate vocational school or a distinct vocational track should be exceptions, not rules, in a technical and changing society. Communication and computation skill become relevant in a context that relates them to an employment objective. All students must be allowed to move into and out of vocational-technical programs and to select mixtures of vocational, technical and academic courses."[1]

Component 40 - Vocational Clusters

A vocational cluster is a family of occupations composed of recognized job titles which are logically related because they include identical or similar teachable skills and knowledge requirements. A cluster is general enough to allow maximum flexibility of choice as far as future preparation or job commitment is concerned. It avoids the training of a student for narrow work specialty. It provides the student with the opportunity to identify a general area of interest, a family of job skills, if you will, and then to relate his general curriculum choices (math, science, English, etc.) to this interest. Motivation through perceived relevance is our goal here.

It is this cluster experience which will form the background or base for specific training at the community college, military, or industrial level. That, plus the relevancy of the general curriculum, should alter extensively the involvement of up to 60% of our student body.

More simply summarized, the cluster concept will, then, develop in the student entry level competencies in a related variety of jobs and provide flexibility in terms of occupational, educational, and geographic mobility.

---

[1] First Annual Report of the National Advisory Council on Vocational Education.

To have an impact on the total student population every cluster which can be offered and supported by student interest is being provided. Priorities on cluster offerings are determined by employment opportunities in the local community. An understanding of the economic conditions and employment mobility of the community is essential.

Experience in a single cluster is reserved until the 11th and 12th grade years. This experience consists of two or three hour laboratory exposure each day during these two years, supplemented by involvement in related work experience in the community.

Well before the specific cluster experience each student has extensive exposure to occupational exploration through a unit of instruction which is a part of the language arts-social studies course in the middle schools at the 7th and 8th grade levels. During the 9th and 10th grade years selections from the general curriculum can be almost totally related to the anticipated cluster choice.

While the term cluster is not new to vocational education the program implemented here is the product of extensive development in the State of Oregon. An intricate network of involvement of Federal finances, State Department of Vocational Education, the Oregon Board of Education, Oregon State University, the University of Oregon, community colleges, the State Advisory Council for Vocational Education, various committees from business and industry, lay persons, secondary school personnel and the Department of Employment have developed this concept to a point of implementation.

The Oregon Statewide Study of Systematic Vocational Education Planning, Implementation, Evaluation, a study completed by the Bureau of Educational Research and Bureau of Business and Economic Research, University of Oregon, under contract with the Division of Vocational Education, Oregon State Department of Education completed the basic study in 1965. This study was funded by the Vocational Education Act.

Sophisticated data collection devices were developed and a projection of major occupational groups for the State during years 1965-70 was developed. An analysis of the Oregon economy was completed and the vocational cluster concept was clarified. Steps to development were:

1. A committee of three members appointed from the staff of the Division of Community Colleges and Vocational Education was assigned the tasks of defining the characteristics and minimal requirements for designation of a cluster and making a tentative identification of the clusters to be included. Working from generally accepted occupational data and applying the best available information, i.e., The Dictionary of Occupational Titles and occupational information developed by the State Department of Employment, the committee identified twelve tentative clusters.*

*Minimum numerical requirements adopted by the committee for inclusion of a tentative cluster were present employment in Oregon of 10,000 workers and a forecast need for 2,000 workers by 1970.

2. The tentative clusters were then submitted to supervisors within the Division of Community Colleges and Vocational Education and other consultants for further anaylysis and recommendations. Neither the procedures used nor the clusters developed received unanimous approval; there was, however, consensus that the clusters identified should be accepted and incorporated in the Guide.

3. Following identification of the occupational clusters to be included, the immediate problem became development of illustrative curriculum content for each. This task involved, as did the cluster identification, analysis of occupations to determine required skills and knowledge. In this state, however, the occupations concentrated upon were the key ones selected for inclusion in each of the clusters.

The procedures followed in content development were:

1. Determination of the skills and knowledges required in the key occupations in each cluster. These were developed for the most part from analyses made by specialists from the Oregon State Department of Employment.

2. Identification of teachable elements inherent in the skills and knowledges determined through analysis of the key occupations.

3. Organization of the identified elements into proposed courses in sample curriculum patterns. This phase of the development was accomplished by small work-groups composed primarily of state staff personnel and other vocational educators. In addition, reactions and recommendations concerning the proposed courses and curriculums were obtained from industrial and labor representatives, as well as from instructors in related subject areas.[1]

Component 50 - Work Experience

Work experience programs of differing thrusts are known over this country. We relate our work experience program to the cluster interest and preparation of our 11th and 12th graders. This on-the-job experience, in addition to the laboratory, in-school experience, makes a total contribution to student vocational preparation. In addition to cluster related experiences our work experience coordinators place school dropouts, or potential dropouts, in short term, highly concentrated vocational training. The community college and existing night school programs assist in this effort.

1 Guide to Structure and Articulation of Occupational Education Programs, State Department of Education, Division of Community Colleges and Vocational Education, Salem, Oregon, 1968.

We continuously expand our existing program of job placement and cultivate our relationship with other youth-oriented programs (i.e. Job Corps, Neighborhood Youth Corps, etc.).

A summary of work experience programs include:

A. Kinds

1. Exploratory Work Experience Education - an extension of the classroom for credit, not to exceed two semesters.

2. General Work Experience Education - provides students with a maturing experience through part-time employment, either during or after school.

3. Cooperative Work Experience Education - employs students within the occupation for which their school courses are preparing them. Students receive either pay or credit or both.

B. Common Characteristics

1. Usually open to juniors and seniors in occupations approved by the school.

2. Supplemental vocational information is offered by the school in related classes or laboratories.

3. Employment is in conformity with local, state and Federal laws, avoiding exploitation.

4. Instructor coordination time is available in both areas with extended contracts for summer.

5. Enrolled students have a declared occupational goal, receive credit, and may be dismissed early in the day.

C. Starting a Program

1. Factors to consider:
   a. Compatibility of existing school philosophy and work experience programs, including attitudes of students, administration, and faculty.
   b. Comparison of community need, employer attitude, and availability of training stations.
   c. Financial arrangement.

2. Steps to take:
   a. Determine supervisory, clerical, and instructional personnel.
   b. Relate instructional orientation to skills, knowledge, and understanding.

c. Establish an advisory committee with stated objectives and understanding.
d. Develop operational plan.
e. Present to Division of Vocational Education.

D. Responsibilities of School Coordinator

1. Location of work stations.

2. Training agreement - student, school, community, and employer.

3. Student selection, interest, and evaluation.

4. Starting and termination procedures.

5. Instigation and maintenance of good public relations.

E. Employer Responsibility

1. Provide necessary training.

2. Provide necessary supervision.

3. Provision for mobility from within.

4. Evaluation and understanding of student.

F. Legal Responsibilities

1. Conformity with Federal, State and local laws -- in both letter and spirit.

2. Maintain insurance protection and a legal reference file.

Our review of the literature relating to work experience has brought to our attention the problem inherent in such a program. Material and procedures developed by the Los Angeles City Schools and reviewed on Eric microfiche have drawn our interest, especially in the areas of staff responsibility and procedure.

Component 60 -- Articulation

While in most vocational programs articulation would be a process and not a separate component, it is so crucial to our design that we will give it specific program development. The key to this entire project rests not entirely in the component programs but in the fashion in which they are related one to another and from one institution to the next. The fact that each program will have effect on all students enrolled and that directions for future planning will be clear, is the strongest portion of our approach.

Articulation will mean that all parties involved(elementary, middle,

and high schools, community college, lay advisory personnel, public agencies) will develop components with the benefit of cooperation, advice, resources and representation of each of the other groups.

The Oregon Board of Education developed two task forces to determine ways that Oregon can reach the largest possible number of students with meaningful occupational preparation. The Report of Task Force II resulted in the report, High School - Community College Curriculum Articulation. This report emphasizes the need for articulated vocational education and suggests models in each of the cluster areas. The task force also designated roles for the secondary and community college programs and pinpointed ways in which program consistencies can be accomplished. Their final recommendations are listed here and the result of each action is available to us as we develop our program, grades 1 through 14.

1. An articulation committee be established in each community college district.

   a. Members of the district articulation committees include:
      (1) Representation from each secondary school district within the community college district.
      (2) Representation from the respective community college.

   b. When more than one community college is readily available to students (such as in the Portland Metropolitan Area), provision should be made for:
      (1) A committee which encompasses all community colleges and secondary school districts, or
      (2) Coordination of a separate committee as established in 1.a above.

   c. A priority function of the articulation committee of each community college district be to develop and execute:
      (1) A plan of articulation of secondary and community college curricula.
      (2) A plan for educational placement of occupational students in the community college.

2. A statewide articulation-allocation committee be established.

   a. Members of the statewide articulation-allocation committee include:
      (1) Representation of one person from each community college.
      (2) Representation of one person from the secondary school districts within each community college district.
      (3) Representation from the Oregon Board of Education.

   b. Community college and secondary representatives of the statewide articulation-allocation committee be members of their respective community college articulation committees.

3. The Oregon Board of Education established a statewide data collecting, recording, and disseminating system for both secondary and post-secondary schools.

   a. The existing Oregon Board of Education titled reports be retained, but revised to coincide with the system devised.

   b. The data be comparable to that of other agencies concerned with the needs of and training for the world of work.

   c. Within this statewide system, there be defined "A vocational student" which is common for all secondary programs and which is compatible with the definition used at the community college level.

4. The cluster approach, developed in the Oregon Board of Education's Guide to Structure and Articulation of Occupational Education Programs, 1968, be implemented by the Oregon Board of Education as the basis for articulation of Oregon's curriculum in secondary schools.

5. Oregon State University develop and implement programs of preservice and in-service teacher education in all the cluster areas defined in the above-mentioned "guide" as one part of a comprehensive plan for preparing occupational education personnel.

6. Oregon Board of Education and Oregon State University establish seminars and workshops to familiarize counselors with the world of work and occupational programs in the secondary schools and community colleges of Oregon.[1]

We will consider all of these recommendations and apply products of statewide programs. In our program no decision which affects direction of the program is made without representation from all levels and institutions involved. The implementation and results of all components will be shared, grades 1 through 14.

Component 70 - Follow-up Evaluation

The final component has two functions: A follow-up study of graduates and the evaluation of the entire program.

Mrs. Jana Jennings, follow-up clerk, has developed, administered, tabulated and written a preliminary follow-up report on the 1972 senior class. See appendix E. Mrs. Jennings is currently collecting additional follow-up data on the 1972 senior class. This material and write up will be reported upon at a later date. Plans have been made to conduct a one, two and five year follow-up of each senior class as well as a follow-up of each school leaver.

1 Articulation and Coordination of Occupational Preparatory Curriculums from High School Through Community College. "Report of Task Force II", Dale Parnell, Superintendent of Public Instruction, Oregon Board of Education.

Evaluation procedure is designed and accomplished cooperatively by a third party, Oregon Board of Education, Research Coordination Unit. See appendix D.

B. GOALS AND OBJECTIVES OF PROJECT VIGOR

The general objective of Project VIGOR is:

To develop a comprehensive career education program for grades 1 through 14.

Specific objectives are for students to:

1. Demonstrate characteristics of a viable work attitude.
2. Identify themselves and their personal characteristics in relationship to their future as wage earners.
3. Use resources of vocational information constantly in the process of vocational goal setting.
4. Recognize the relevancy of general curriculum experiences (English, math, science, social studies) to future employment.
5. Demonstrate skills and knowledges accrued from courses which relate to vocational education at later grades.
6. Demonstrate skills and knowledges demanded for entry employment in jobs which have common characteristics and which belong to a family of vocations. (Vocational clusters)
7. Transfer general curriculum tool skills (reading, writing, computation, scientific concepts, etc.) because of a recognition of their relevancy to vocational experiences.
8. Elect further vocational training after high school.
9. Perform satisfactorily in the community, under school supervision, work experience assignments related to classroom instruction.
10. Complete at least four years of high school by not dropping out.

Task objectives necessary for program implementation are:

1. To provide awareness and exploratory opportunities, and demonstrate school's relativity to life programs for students in grades 1 through 6.
2. To provide a specific class experience, grades 7 through 9, enrolling all students which will clarify the role of the worker, employer, government and community in the world of work and which will present sources of vocational information.

3. To provide an integrated career guidance program, grades 1 through 14.

4. To provide specific courses in the general curriculum which emphasize their relevancy to future vocations and job needs by identifying activities and materials which emanate from student vocational goals and objectives.

5. To organize patterns of related courses which if elected by students will provide basic understanding and skills necessary for more specific vocational training.

6. To develop program, staff, training models, facilities for vocational cluster experiences by the end of three years for approximately 800 eleventh and twelfth graders each year.

7. To articulate all program components through the community college level.

8. To provide meaningful on-the-job work experiences which relate to vocational interests and training for approximately 800 high school students.

9. To create, design, and implement a follow-up study of high school graduates for continued program improvement and expansion as well as evaluative data.

GOALS OF PROJECT VIGOR AS ADOPTED BY DAVID DOUGLAS SCHOOL DISTRICT - FEBRUARY 9, 1971

PRIMARY - Every child will see the world of work as a part of his developing self and will learn some career classificatio..s (jobs) by name.

INTERMEDIATE - Every child will be able to identify the relationship between his school courses and the world of work and will learn to group employment classification into job families. Every child will see the world of work as a significant part of his developing self and will learn the names of many jobs.

MIDDLE - Every student will be able to relate a knowledge of his own characteristics to known occupational requirements and will be able to locate detailed information about specific job requirements. Every student will be able to identify the relationship between his school courses and the world of work and will learn to group employment classification into job families. Every student will see the world of work as a significant part of his developing self and will learn the characteristics of many jobs.

JUNIOR - Every student will explore chosen occupations and select courses supportive to his broad career field choice. Each student will demonstrate a knowledge of the relationship between his developing education and his emerging vocational being. Every student will be able to relate a knowledge of his own characteristics to known occupational requirements and will be able to locate detailed information about specific job requirements. Every student will be able to identify the relationship between his school courses and the world of work and will learn to group employment classification into job families. Every student will see the world of work as a real part of his developing self and will be able to list many jobs by name.

SENIOR - Every student will elect a combination of courses specifically designed to meet needs of students having chosen his career area. Every cluster student seeking entry level skills will develop those qualities necessary to obtain employment in his chosen occupational area. Every student will explore chosen occupations and select courses supportive to his broad career field choice. Each student will demonstrate a knowledge of the relationship between his developing education and his emerging vocational being. Every student will be able to relate a knowledge of his own characteristics to known occupational requirements and will be able to locate detailed information about specific job requirements. Every student will be able to identify the relationship between his school courses and the world of work and will learn to group employment classification into job families. Every student will see employment as a real part of his developing self and will be able to describe many jobs within his chosen career area.

POST HIGH SCHOOL - The school will provide follow-up contact service for former Douglas students and placement assistance, where possible, for youth of this community. Compatibility of programs for students advancing from David Douglas to an institution of higher education will be maintained.

Career Concepts from the Philosophy of Project VIGOR

David Douglas School District 40

Career education is that portion of general education which is purposefully designed to provide an environment for developing attitudes by which an individual approaches decisions concerning services which he will exchange for the goods and services that he will receive from his community.

Concepts included within the philosophy of career education are:

(1) All people contribute something to other people in exchange for their psychological and physiological requirements.

(2) The organization of learning (called teaching) about that adult portion of life called vocation (job, work, profession, employment) belongs in all areas and groupings of education (as do other concepts of general education such as responsibility, reasoning, and self-direction).

(3) Career education must prepare an individual to deal psychologically with both anticipated and unexpected changes in environmental requirements.

(4) Vocational selection is an individual right (as is religion, marriage, or recreation).

(5) Level of position (skilled, technical, managerial, professional) within a vocational area (medical, mechanical, educational, food service, etc.) is determined by competency and desire based on education, experience, and effort.

(6) Vocational education (that part of education which prepares a person for a given area of employment; i.e. apprenticeship, school of education, trade school, law school, medical school) is offered by society to help an individual meet his vocational ambitions.

(7) Vocational education should be available in terms of the needs of society (people) which is composed of individuals whose readiness for some aspect of vocational education may range from childhood to senior citizen.

(8) Career education fits into the affective (attitude) domain - vocational education deals largely with the cognitive (knowledge) and psychomotor (physical) domains.

22APR71
011/k

C. GENERAL PROJECT DESIGN

Oregon's fifth largest school system, David Douglas is organized on a 6-2-2-2 basis, with ten elementary schools, two middle schools, and a campus-style high school. There are approximately 6,000 students in grades 1 through 8 and 3,000 high school students. The certified staff numbers 457, with 300 additional employees. The curriculum has been traditionally college-oriented.

Project VIGOR is an implementation of an educational philosophy calling for those changes in instruction which will best prepare all students for decision-making in terms of life work.

Component 30 - General Curriculum

The Project is operating in grades 1 through 14, including awareness, orientation, instruction, exploration, preparation, placement, and follow-up.

Awareness of people on jobs is a major thrust of the primary grades. The students are encouraged to look at adults as people who have jobs to do in society, and are helped in forming understandings of the functions of these jobs. (See appendix F for one example of career awareness programs)

A concerted effort to help students see the relationship of their school courses and the jobs which they will one day have is begun in the primary grades and carried all through school. Projects at all grade levels are being tested in terms of relating course work to the world of work.

Component 20 - Guidance

Guidance is regarded as the central nervous system of career education, with all counselors becoming increasingly aware of their unique role with respect to student preparation for the world of work. Oregon Board of Education Guidance Specialists are providing leadership in the evaluation of this expanded guidance concept. Portland State University is providing inservice work which is helping teachers and counselors clarify the role of the school counselor in career education.

Component 10 - Exploration

Career Education at the Middle School level has centered mostly around the exploration of self and occupational areas. In the 7th grade classroom activities are centered around group interactions, discovery of oneself, including organizational activities, and to some degree, decision-making skills. All 8th grade students are offered a unit of career study in the language arts - social studies blocks. Our experience in this program suggests that locating it at the middle building level (7th - 8th grades) will be more effective for students. Through their classroom activities they become acquainted with work permits, social security cards, interviewing, personality and attitude influences and occupational groupings. All these students take the USTES, United States Testing Evaluation Services, Interest Survey which is interpreted and explained to students and parents by the counselor. The 8th grade students are also given the opportunity to make a one-day on the job visitation. Through the services of IPAR Institute for Public Affairs Research, a number of speakers and field trip experiences have been provided. Gradually, other subject areas are emphasizing career education in their curriculum.

Component 40 - Cluster Curriculum

The Project started the 1970-71 school year by adding four cluster courses to the 11th and 12th grade selections. Four additional courses were added for the 1971-72 school year and four more cluster classes were added for the 1972-73 school year. This gives us a total of twelve cluster classes for the District Project.

CLUSTER COURSE ENROLLMENT AT DAVID DOUGLAS HIGH SCHOOL

Course Title	Department	1970-71	1971-72	1972-73	Predicted 1973-74
Child Services	Home Economics	13	85	74	95
Food Services	Home Economics	13	50	80	93
Clerical	Business Ed	58	62	35	42
Industrial Mechanics	Industrial Ed	58	194	54	61
Health Services	Science	--	25	54	83
Industrial Electronics	Industrial Ed	--	27	23	28
Diversified Occupations	Business Ed	--	73	81	89
Industrial Metals	Industrial Ed	--	18	19	42
Accounting	Business Ed	--	--	14	23
Construction	Industrial Ed	--	--	54	38
Secretarial	Business Ed	--	--	15	27
Horticulture	Science	--	--	17	23
	TOTALS	142	534	520	644

These twelve clusters form the heart of occupational preparation in Project VIGOR and provide at least job entry level skills for each enrolled student.

Additional occupational preparation is offered to students in business education classes that are not classified as cluster classes.

Component 50 - Cooperative Work Experience

The cooperative work experience program is our link between school-based instruction and industry-based application. Student, school and community compose this interesting aspect of complete career education.

With counsel from the Oregon Board of Education Career Education Specialists, we have revised and re-staffed our work experience program. We expect these changes to facilitate a greater student-community involvement with the employment aspects of the Project.

Our work experience program has benefited from the expertise of each cluster instructor and has occupied major attention from our work experience supervisor and our instructor of diversified occupations. We have drawn heavily upon the advisory committees for help in establishing effective components of the work experience program.

During the Project cluster students were placed in the following work experience areas:

	1970-71	1971-72	1972-73
True Co-op work stations within the community	26	64	97
Clinical experiences - Health areas	0	17	64
School sponsored house construction - Construction	0	0	48
Day Nursery - Child Service	0	15	27
Accounting for Construction - Accounting	0	0	6
Student operated restaurant - Food Services	0	42	84
TOTAL	26	138	326

In addition to the above a student placement center has been operated by the diversified occupations students. See appendix G.

Component 60 - Articulation

Articulation is being achieved through personal contact and through advisory committee activities. Greater visibility is being sought through the use of brochures now in the development stage and more newspaper coverage through greater activity at the public relations level. A public relations advisory committee has been active. Among its membership are community college, community and school district personnel.

Project personnel, district administration and teachers have been quite active in visitation of programs within the state and in several cases nationally. They have also hosted many visitors from many schools in many states. See appendix F.

Component 70 - Follow-up and Evaluation

Through the Oregon Board of Education this school uses the VERIFY system for follow-up of students. A local supplementary follow-up program is being designed to serve needs beyond the scope of the VERIFY program. Particular attention is paid to the needs of the handicapped graduate, in order to assure him/her of a support structure for subsequent employment or counseling needs. Close contact with the Oregon State Division of Vocational Rehabilitation is maintained for those students having special problems in the school-work transition. Also see page 24 , appendix C and appendix E.

D. RESULTS AND ACCOMPLISHMENTS OF THIS PROJECT

The accomplishments of Project VIGOR occur largely in terms of an awareness of career education as a part of the general curriculum. This awareness has been stimulated within the community by news releases and activities of the advisory committees. The professional staff has been oriented by District in-service workshops, faculty meetings, individual contacts, and special projects described throughout the body of this report.

The table on Cluster Course Enrollment on page 30 and additional enrollment data on page 31 indicates results in terms of student participation in vocational courses.

The experimental orientation programs conducted at the middle schools involve approximately 1500 students. Results from this program will be shown in subsequent evaluation reports.

Advisory committees have involved 98 lay community members, 28 certificated staff members and 16 students. These committees have been a first step toward community involvement other than school board and budget committee for this District. The committees have proven such a valuable addition to the planning and implementation of Project VIGOR that Lincoln Park grade school and Ventura Park grade school have organized very active advisory committees.

Two career awareness in-service workshops were started on March 26, 1973. Each have involved the entire staff of an elementary school in planning a year long activity for students, faculty and community.

Ten faculty members have contracted to write a syllabus for a college credit course related to their discipline on "Career Education in my classroom and how to inner-relate it." Each will teach the course in the fall or winter term of 1973-74 to other teachers for college credit.

E. EVALUATION OF THE PROJECT

Evaluation is an ongoing operation within the Project and a responsibility of the Project administration. Third party evaluation is the contracted responsibility of the Oregon Board of Education Research Coordination Unit. Copies of the O.B.E. R.C.U. final report evaluation will be attached as Appendix C to those copies of this interim report going to those governmental agencies under whose supervision Project VIGOR operates.

Appendix D is the proposal submitted by O.B.E. R.C.U. for evaluating Project VIGOR for the fiscal year July 1, 1972 - June 30, 1973. This appendix is included to give you an overview of the services performed by the third party evaluator.

Mrs. Jana Jennings has been working with the senior class of 1972 and their present activities and opinions as to how relevent their high school education has been to their present activities. A write up on the initial survey given the senior class may be found in appendix E. Follow-up plans have been made to conduct one, two and five year surveys of students leaving David Douglas School District.

F. CONCLUSIONS

Project VIGOR is a guidance-oriented curriculum project whose visibility exists through changes in student behavior. We are trying to change the entire curriculum in those ways which will make most likelv those student experiences which result in a total alumni capable of engaging effectively with the world of work on a continuing basis.

In terms of the above-stated objective, the Director of Project VIGOR considers the third project year successful.

Course content, teaching methodology, staffing patterns, personnel interaction, materials and equipment are coordinated into a total school curriculum which might pass as "conventional" until examined in terms of post high school results.

Implications of this Project should favor an educational design appropriate for implementation by any other school system with similar aspirations for its graduates without imposing an expensive or disruptive reorganization program.

The Project management recommends a continuation of established direction, reinforced by additional staff orientation and involvement, and increased articulation with total community including students, staff, administration, parents, tax payers, business and industry representatives.

APPENDIX A

BIBLIOGRAPHY

BIBLIOGRAPHY

Betz, Robert L., and others, Perceptions of Non-College-Bound Vocationally Oriented High School Graduates, Kalamazoo, Michigan, Western Michigan University, 1968.

Darcy, Robert L., An Experimental Junior High School Course in Occupational Opportunities and Labor Market Processes, Ohio University.

Draper, Dale C., Educating for Work.

Feldman, Marvin J., Making Education Relevant.

First Annual Report of the National Advisory Council on Vocational Education.

Miller, Juliet V., Intensive High School Occupational Guidance Approaches for Initial Work and Technical School Placement, U.S. Office of Education, (CG400003).

Oregon State Department of Education, Guide to Structure and Articulation of Occupational Education Programs, Division of Community Colleges and Vocational Education, Salem, Oregon, 1968.

Oregon State Department of Education, Self-Understanding Through Occupational Exploration (SUTOE), Department of Education, Division of Community Colleges and Vocational Education, Salem, Oregon, 1969.

Parnell, Dale, Articulation and Coordination of Occupational Preparatory Curriculum From High School Through the Community College, Report of Task Force II, Oregon Board of Education, Salem, Oregon, 1969.

Sloan, Nancy, Orientation Approaches to Increase Student Awareness of Occupational Options, U.S. Office of Education, (CG400002).

State Advisory Council for Vocational Education, The Challenge of Change, 1968.

State of Oregon, Final Report of the Education Improvement Advisory Commission, 1966.

Varenhorst, Barbara R., The Life Career Game, The School Counselor, 1968.

Venn, Grant, Man, Education, and Work.

Project VIGOR
Oregon's Exemplary Program in Career Education

Bibliography of Locally-Produced Curriculum & Instructional Materials

Project No. 0-361-0055

No copies available for distribution at this time.

NATURE OF MATERIALS	TITLE	GRADE LEVEL	EVALUATION
Teacher Handbook (150 pages)	Career Education Elementary School Teachers' Guide to Ideas - Career Awareness	1-6	Use of materials initiated in Fall of 1971. No revision at this date.
Teacher Handbook (15 pages)	The Individualized Field Trip in Primary Education Within a Social Studies and Economic Unit	2	Use of materials initiated in Fall of 1971 for one class of 30 students. No revision as yet.
Teachers' Guide (Kit containing transparencies, film list, pamphlets, maps, charts)	Work in the Woods	4	Developed to use in Spring 1971
Teacher Handbook (60 pages)	Ventura Park Career Enrichment Project	4-6	Use of materials initiated in one elementary school in Fall 1971. No revision as yet.
Teacher Handbook (50 pages)	Seventh Grade Teachers' Guide in Career Education for Gilbert Middle School Students	7	Use of material initiated in Fall 1971 to class of 495. No revision as yet.
Teacher Handbook (101 pages)	Eighth Grade Teachers' Guide in Career Education for Gilbert Middle School Students	8	Use of material initiated in Fall 1971 to class of 410. No revision at this date.
Teacher Handbook (35 pages)	Electricity-Electronics Course of Study	9-12	Use of material initiated in Fall 1971 to class of 27. No revision at this date.

Project VIGOR
Oregon's Exemplary Program in Career Education

Bibliography of Locally-Produced Curriculum & Instructional Materials, cont'd. Project No. 0-361-0055

NATURE OF MATERIALS	TITLE	GRADE LEVEL	EVALUATION
Learning Packages (230 pages)	Industrial Mechanics	11-12	Use of materials initiated in Fall 1971 to Industrial Mechanics classroom of 204 students. No revision as yet.
Teachers' Handbook (100 pages)	Food Service	11-12	Use of materials initiated in Fall 1971 to class of 49 students. No revision at this date.
16 Audio Tapes & 90 Preview Sheets	Shorthand Practice Tapes for Speed Development	11-12	Material being used by 60 students on assignment and volunteer basis. Present evaluation indicates much usage of tapes, and improvement of speed over that of previous students.
Teacher Handbook (60 pages)	Metals and Industrial Metals - Course of Study	11-12	Use of materials initiated in Fall 1971 for 50 students. No revisions as yet.
Teacher Handbook (21 pages)	Our Project - a Line Production Adventure	10	Use of materials initiated in Fall 1971 to woodshop class.

10Dec71

APPENDIX B

CLUSTER EXPLORATION AT THE NINTH GRADE

THE CRUISE PROGRAM
DAVID DOUGLAS SCHOOL DISTRICT

The ninth grade students at David Douglas High School have been involved in a hands-on exploration and study, Cruise, of each of our cluster classes.

The Cruise program is designed to give each student an exposure to each of the cluster areas being offered at the eleventh and twelfth grade.

The clusters have been divided into three groups. Each group is supervised by a teaching aide.

A. Service Group includes the Health Service Cluster, the Child Service Cluster, the Food Service Cluster and the Horticulture Cluster.

B. Business Group includes the Accounting Cluster, the Clerical Cluster, the Secretarial Cluster and the Diversified Cluster.

C. Trade and Industry Group includes the Construction Cluster, the Mechanics Cluster, the Metals Cluster and the Electronics Cluster.

Each student spends one period per day for seven school days in each of the above mentioned groups. During this seven day period the students examine families of occupations, visit actual cluster classes, view film strips and participate in hands-on activities in the following areas:

Group A - Learn to and actually take pulse and blood pressures; prepare cook and eat small pizzas, plant and grow radish seeds and observe the pre-school students in the Child Service Nursery school.

Group B - Practice on typewriters and type small projects; practice and solve simple problems on the adding machines and calculators.

Group C - Lay out, cut, form and solder a tin box; cut, fit and nail an 8" letter "E" using 1 X 1 pine stock, utilizing four different types of joints and manipulate and adjust oscilloscope to various sound patterns.

It is hoped that this activity will stimulate additional exploration by students and will enable them to logically make course selections.

The ninth grade teachers, the ninth grade counselors, and Mr. Loe, junior building principal, have all expressed a feeling of success regarding the Cruise program. It is the intent of district staff that the Cruise program be moved to the eighth grade. It is felt that by having it at the eighth grade level and as a part of the middle building exploration program the students will have an additional amount of time to plan their careers.

Our experience in this program suggests that locating it in the middle building level (7-8 grades) will be more effective for students.

CRUISE PROGRAM SUMMARY

MAJOR GOAL

The cruise is an explorational experience designed to serve 9th grade students. Opportunities are provided so students can discover the various cluster areas offered to 11th and 12th graders.

Students are scheduled into the cruise from their study hall class. Each cycle, in the cruise lasts twenty-one days. The group is divided into three groups including boys and girls. The small groups then go through a seven day period in each of three major cruise divisions.

Together the three divisions represent twelve cluster areas in (1) business and office education (2) service areas and (3) industrial materials and processes. These cover the twelve cluster offerings including diversified occupations.

The program in non-credit and student evaluation is based on a pretest and a posttest. The immediate objectives are to give students some general notion as to what each cluster is about, such as the kinds of jobs that are included, what kinds of activities a cluster student might engage in and some typical skills developed in each cluster. A wide variety of learning experiences are provided to enlarge students understanding.

The students attending cruise are involved in discussions, projects and hands-on activities in real situations. As illustion of this is, students in the health services section are exposed to realistic models of various organs and parts of the human body. They are allowed to use stethoscopes and bloodpressure testers to actually test each others blood pressure and heartbeat. In addition to this students visit the health cluster and talk to students and instructors about the cluster program.

The responsibility for presentations and directing student experiences is that of the three instructional aides. They determine course content and activities by meeting with cluster instructors and talking about practical and effective explorational experiences.

The overall attitude of students has been very positive regarding the cruise. Most students have indicated a greater interest and understanding in their career goals and logical course selections.

APPENDIX C

EVALUATION

FINAL REPORT

THIRD YEAR ANNUAL AND THREE YEAR

EVALUATION

of

PROJECT VIGOR: Vocational Cluster Education, Integrated and Articulated Grades 1 through 14 with Guidance Services, Occupational Exploration and Work Experience Relevant to General Education

DAVID DOUGLAS PUBLIC SCHOOLS
Portland, Oregon

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Project No. 0-361-0055
Contract No. OEG-0-70-5187(361)

Evaluation Conducted by

Applied Research
(Research Coordinating Unit)

Career Education
Oregon State Department of Education
Salem, Oregon

May 31, 1973

CONTENTS

FOREWARD AND ACKNOWLEDGEMENTS

The following report of evaluation of Oregon's Three-Year Exemplary Project in Vocational Education, "PROJECT VIGOR" is presented in two sections.

Section I is a report of the evaluation of the final year (1972-73) of the three year project. Section II reports the evaluation of the total three year project (1970-73). Section I will also be referred to hereafter as the "annual evaluation", and Section II as the "three-year evaluation". Both evaluations are in response to guidelines from the U.S. Office of Education set forth in a memorandum dated July 25, 1972 from Dr. Sidney C. High, Jr., Chief, Program Development & Operations Branch, U.S. Office of Education.

The third party evaluation team was composed of six staff members from the Program Development and Evaluation and Applied Research and Exemplary Programs (Research Coordinating Unit) sections of the Career Education Division, Oregon Department of Education, which was the contracted third party evaluator.

In addition, two consultants were engaged to perform special functions with regard to evaluation design, instrument development, electronic data processing, and three year evaluation, to bring to eight the number of professional staff involved in this multi-dimensional evaluation effort.

The evaluation staff and their areas of special and general responsibility included:

- State Department of Education Staff

- Dr. Dan Dunham	- Evaluation Project Coordinator, Cluster programs, total program and final reports.
- Dr. Dave Fretwell	- Evaluation design; data processing; cluster programs; interpretation and reporting.
- Mr. John Davies	- Elementary Career Awareness Programs; interviewing; data synthesis and interpretation.
- Mr. Tom Williams	- Jr. High-Mid-School Career Exploratory Programs; interviewing; data synthesis and interpretation.
- Miss Jean Massie	- Instrument develop and administration; data and information synthesis.
- Mr. Curt Rehn	- Instrument administration; data synthesis; field coordination for total project; interviewing.

- Special Consultants

- Mr. Peter Wolmut	- Evaluation design; criteria and measurement development; instrument design; data processing, reporting and interpretation.
- Mr. Dale Ward	- Three year evaluation coordination; development of Section I ; interviewing, interpreting and development of final report.

It is important to note the role which Mr. Ward filled in the total evaluation effort. Since it was the intent of the primary evaluator to produce as objective an evaluation of the impact of the total three year project as possible, this special consultant was given primary responsibility for coordinating and conducting that phase of the evaluation. The findings, conclusions and recommendations found in Section II, the three year evaluation report, while related and often referenced to those in Section I, are essentially the results of this consultant's independent work.

Local staff responsibilities for the evaluation effort were agreed to by the VIGOR administration. At least one project staff or building administrator was identified as a primary contact person for each level or area. This arrangement enhanced the participatory style of operation of this evaluation project, and allowed very open communication and coordination of the many activities of the evaluation.

The evaluation team expresses its sincere thanks to each member of the Project VIGOR staff, and to building administrators, counselors, teachers, and students who participated in this evaluation. In particular, the evaluators are indebted to the VIGOR staff, including Dr. Omer McCaleb, project director, Stan Gaumer, assistant director, staff members Dean Griffith, Pat Cline, Ernie Keller, and Jana Jennings, and to the efficient and cordial secretaries Norma Shockley, Joan Rossos, and Patty Griffith.

We trust that the following reports will prove useful to the David Douglas school district, its staff, students and patrons, as they continue to implement a comprehensive career education program for all learners.

Dan Dunham, Evaluation Coordinator

Dave Fretwell

Tom Williams

John Davies

Curt Rehn

Jean Massie

Peter Wolmut

Dale Ward

SECTION I

Final Annual Report

Project VIGOR Evaluation

for the

Project Year 1972-73

INTRODUCTION

This is the final report of the evaluation of the David Douglas Public Schools Project VIGOR, for the school year 1972-73.

The evaluation was conducted by the Applied Research unit (Research Coordinating Unit) of the Career Education Section, Instructional Services Division, Oregon State Department of Education, Salem, serving as contracted third party evaluator. In addition to the staff of the division, special consultation was utilized in the design of the evaluation plan, the development of instrumentation for data collection, the design and conduct of the evaluation, and the interpretation, synthesis and initial analysis of the gross data.

The evaluation was formed as a participatory activity with members of the Project VIGOR administration, David Douglas Public Schools administration and the teaching and administrative staff in each of the several buildings in the David Douglas School District.

PROCEDURES

In December, 1972, meetings were held with Project VIGOR staff and evaluation team members to propose methods of measuring project and student outcomes. There was not enough time to repeat the synthesis performed for the second-year evaluation and there was no clear-cut evaluation plan in the original project proposal. Furthermore, project staff were quite concerned about responses from students who had been involved in so much testing that they were beginning to rebel at questionnaires being presented to them.

At this point, it was suggested that an evaluation plan be developed which would start with basic broad objectives of the project. These would be broken down into more specific objectives and for each of these a statement with a measurable verb would be written and the means of measurement and expected performance standard openly stated.

Nine broad outcomes were stated by the evaluation team which would cover both third-year and three-year evaluation:

Objectives:

I. Students are more aware of themselves through the project.

II. Students are more aware of the world of work through the project.

III. The David Douglas staff provides career awareness experiences to students in an integrated fashion.

IV. Students explore appropriate careers through the project.

V. The David Douglas staff provides career exploration experiences to the students in an integrated fashion through the project.

VI. Cluster programs are provided for students through the project.

VII. Students have opportunities to work in a cluster area in grades 11 and 12 in order to be employed or continue training after graduation through the project.

VIII. David Douglas staff provide integrated career experiences in grades 11 and 12 through the project.

IX. Management provides planning and support services to David Douglas staff through the project.

After the plan had been developed, all material except performance standards were presented to project VIGOR staff for review. The project staff raised a few objections which, when possible were met with changes. For example, the original plan called for 10th grade students to be studied regarding career exploration. Project staff felt that this was not the emphasis for grade 10 students attending during this school year. Eighth grade students were substituted (Again 9th grade students had been over-tested).

Once major objectives had been met, the means for measurement were developed and agreed to by project staff and the evaluators, and the final evaluation design was produced (Figure 1).

Since the project was Exemplary, it was felt that student outcomes at David Douglas should be compared with a control school. A comparable district was selected on the basis of size, semi-urban environment, and no formal career education program.

Administrators at the recommended control school district were contacted and granted approval for testing to be conducted in their district. Lists of schools with student names were supplied, from which random samples were drawn according to the evaluation design (Figure 1).

Likewise, Project VIGOR staff provided lists of schools with student names from which random samples for testing were drawn.

Evaluation staff contacted building administrators in both the experimental (David Douglas) and control districts to make arrangements for student testing. All test administration was completed by May 10, 1973 at both schools.

Names of teachers for the interviewing process were drawn at random from lists supplied by Project VIGOR staff. A total of 64 teachers, counselors and administrators in the David Douglas district were interviewed individually by six members of the evaluation team. Results of these interviews are reflected in the findings section

of this report, which follows.

Each evaluation team member synthesized interview data and correlated the information to the evaluation design. Questionnaire data were scored and synthesized by three evaluation team members. All statistical tests were run and tables of results developed by one team member, the measurement consultant.

The findings which follow are the result of all questionnaires, tests, and interviews conducted through the evaluation process. Findings are displayed against the format of the evaluation design (Figure 1). Comments, rationale and interpretive statements are integrated with test, interview or questionnaire results and treatment, for the sake of brevity and clarity. A summary of findings is presented which addresses the major components of the project as found in the original project proposal.

FIGURE 1

PROJECT VIGOR EVALUATION DESIGN

Career Awareness

I. Students are more aware of themselves through the project.

A. Grade 3 students are better able to identify career attributes about themselves.

1. The student can state why he is unique and how his uniqueness applies to the world of work more often at David Douglas than at control.

MEASUREMENT (MEAS:): A questionnaire administered to a sample of 100 experimental and 100 control students, Grade 3 level.

EXPECTED PERFORMANCE STANDARD (EPS:): The proportion of experimental correct responses will be higher than control responses, at the 5% level of significance.

2. The student can identify some job that requires individual operation and that other work requires operating with a group more often at David Douglas than at control.

MEAS: Same as I-A-1.

EPS: Same as I-A-1.

B. Grade 6 students are better able to make cluster choices based on information about themselves.

1. The student chooses one or more clusters for exploration more often at David Douglas than at control.

MEAS: A questionnaire administered to a sample of 100 experimental and 100 control students, grade 6 level.

EPS: Same as I-A-1.

2. The student can describe attributes of himself in making that choise more often at David Douglas than at control.

MEAS: Same as I-B-1.

EPS: Same as I-B-1.

II. Students are more aware of the world of work through the project.

A. Grade 3 students are better able to identify that jobs have different requirements.

1. The student can identify more jobs at David Douglas than at control.

MEAS: Same as I-A-1.

EPS: The mean number of jobs identified at David Douglas will be higher than the mean number of jobs identified at control, at the 5% level of significance.

2. The student can state the difference between two jobs more often at David Douglas than at control.

MEAS: Same as I-A-1.

EPS: Same as I-A-1.

B. Grade 6 students can better identify a family of jobs (cluster) and a major occupation in that family.

1. The student correctly relates a given job to its proper family (cluster) more often at David Douglas than at control.

MEAS: Same as I-B-1.

EPS: Same as I-B-1.

2. The students can make a correct statement of the service performed or product produced in that given job more often at David Douglas than at control.

MEAS: Same as I-B-1.

EPS: Same as I-B-1.

III. The David Douglas staff provides career awareness experiences to students in an integrated fashion.

A. Teachers have developed written plans for career awareness activities and have implemented them.

1. Teachers have actively recruited resource personnel representing the spectrum of jobs in the community for in-class discussion of occupations.

MEAS: A sample of 10 teacher plans.

EPS: Each plan will contain at least 3 projected uses of community resources, 2 of which will represent different clusters and income levels.

2. Teachers have implemented plans by having these speakers appear in class.

MEAS: A sample of 10 teacher activity reports.

EPS: At least 21 of the 30 expected speakers will have spoken in class.

3. Teachers have related specific examples of curriculum material to career awareness.

   MEAS: Same as III-A-1.

   EPS: At least 10 teacher plans contain at least one such example.

B. Counselors have better provided career awareness activities.

1. Counselors have provided more individual and group career awareness activities at David Douglas than at control.

   MEAS: Same as I-B-1.

   EPS: Same as I-B-1.

   EPS2: At least 80% of the David Douglas students will describe some career awareness experience conducted by the school counselor.

C. Building coordinators have provided career awareness activities.

1. Building coordinators have coordinated career awareness activities for the staff.

   MEAS: A questionnaire to a sample of 10 teachers.

   EPS: At least 80% of the persons will cite an example of the Building Coordinator having coordinated an activity.

2. Building coordinators have provided a guide for integrating the elementary curriculum with career awareness.

   MEAS: Building coordinator guides.

   EPS: Each of the Building Coordinator's will have produced a guide.

Career Exploration

IV. Students explore appropriate careers through the project.

A. Grade 8 students can better indicate tentative cluster choices (including not having made a specific choice).

1. The student states a plan and reasons therefor for exploring or not exploring one or more clusters more often at David Douglas than at control.

   MEAS: A questionnaire administered to a sample of 100 experimental and 100 control students, 8th grade level.

   EPS: Same as I-A-1.

B. Grade 8 students can better narrow their choice to one or two clusters based on understanding of self.

1. The student gives an example of the career selection process more often at David Douglas than at control.

   MEAS: Same as IV-A-1.

   EPS: Same as IV-A-1.

C. Grade 8 students have had a field experience in one or more occupations.

1. The student has spent at least 3 days total outside the classroom on one or more jobs or in job settings.

   MEAS: A questionnaire administered to a sample of 100 students, 8th grade level.

   EPS: At least 80% of the students will have spent at least 3 days outside the classroom on a job.

D. Grade 8 students have been exposed to the basic skills required of their chosen cluster.

1. The student has spent at least one week outside the classroom on a job or in a job setting in his chosen cluster.

   MEAS: Same as IV-C-1.

   EPS: At least 40% of the students will have spent at least 3 days outside the classroom on a job in their chosen cluster.

V. The David Douglas staff provides career exploration experiences to the students in an integrated fashion through the project.

A. Teachers and counselors have integrated subject matter content with career exploration goals.

1. The staff member has a written plan for relating his subject matter content (counseling) to career exploration.

   MEAS: A sample of 10 teacher plans and 2 counselor plans.

   EPS: Each plan will contain at least 1 statement relating subject matter to career exploration.

2. Teachers and counselors have provided alternative choices to individual student program planning.

   MEAS2: A questionnaire administered to a sample of 100 teachers and students.

   EPS2: At least 80% of the teachers and 80% of the students will cite at least one specific example of an alternative choice being provided.

B. Community resources have been actively involved in career exploration activities.

1. Community resources have been used in classroom activities.

   MEAS: Same as V-A-1.

   EPS: At least one community resource used in each plan.

2. Community resources have provided student work experience.

   MEAS: Same as Iv-C-1.

   EPS: At least 25 jobs will have been located in the David Douglas community.

Career Clusters

VI. Cluster programs are provided for students through the project.

A. Each cluster follows Oregon state guidelines.

1. Each cluster has a certified instructor.

   MEAS: A description of the David Douglas cluster program.

   EPS: The certified instructor is identified for each cluster.

2. Each cluster has an active advisory committee.

   MEAS: Same as VI-A-1.

   EPS: The names of the advisory committee members are listed.

   MEAS: Minutes of 1972-73 advisory committee meetings or files in the Project office.

   EPS: Each committee shall have met at least once this school year.

3. Each cluster has physical facilities to implement it.

   MEAS: Same as VI-A-1.

   EPS: At least 9 of the clusters have sufficient physical facilities.

4. Each cluster has an approved program plan.

   MEAS: Same as VI-A-1.

   EPS: At least 9 of the clusters have an approved program plan.

B. Cluster course content incorporates the Oregon Board of Education instruction guides.

1. Skills and knowledge are being taught in each cluster.

MEAS: The David Douglas cluster guides.

EPS: At least 80% of skills and knowledges listed in each guide are incorporated in the David Douglas course content.

VII. Students have opportunities to work in a cluster area in grades 11 and 12 in order to be employed or continue training after graduation through the project.

A. Students are pursuing career choices in cluster curriculum more often now than in 1969-70.

1. More students in grades 11 and 12 are enrolled in a cluster program now than in 1969-70.

MEAS: Enrollment figures for 1969-70 and this year.

EPS: Percent of total 1972-73 student body enrolled in clusters is higher than same percent for 1969-70, at 5% level of significance.

2. The number of students enrolled in each cluster has increased.

MEAS: Enrollment figures for each cluster for all years 1969-70 through 1972-73.

EPS: The number of students in each cluster shall have increased each year.

B. Students in the cluster curriculum for grades 11 and 12 stay in school.

1. Students enrolled in clusters drop out of school less than students not enrolled in clusters.

MEAS: Grade 11 and 12 dropout figures for 1972-73, with each such student identified as having or not having been enrolled in a cluster.

EPS: Percent of cluster-enrolled drop-out students is lower than percent of non-cluster-enrolled drop-out students, at 5% level of significance.

C. Graduates are pursuing employment or additional training in the area for which they were involved in a cluster.

1. 1971-72 graduates show greater involvement in their high school area of training at David Douglas than at control.

MEAS: A questionnaire administered to 100 cluster graduates of David Douglas and 100 graduates of control.

EPS: Percent of David Douglas respondents will show greater involvement than percent of control respondents, at 5% level of significance.

2. Students achieve competencies related to the clusters they are in.

   MEAS: Teacher competency test given to a sample of 100 cluster students randomly selected from all David Douglas cluster programs.

   EPS: 80% of the students will score at or above the 75% level on the competency test.

D. Students have been more involved in cooperative work experiences (CWE).

1. There is an increase in the number of students in cooperative work experiences each year since 1969-70.

   MEAS: Cluster and cooperative work experience figures for each year since 1969-70.

   EPS: Percent of cluster students in cooperative work experiences will increase each year since 1969-70.

VIII. David Douglas staff provide integrated career experiences in grades 11 and 12 through the project.

A. Cluster and academic teachers have integrated program content towards career cluster goals.

1. Each cluster and academic teacher has a written plan for relating his subject matter to all clusters.

   MEAS: A sample of 14 academic and 12 cluster teacher plans for cluster instruction.

   EPS: Each plan will contain at least one statement relating its subject matter to clusters.

2. Each cluster and academic teacher has a plan for relating his cluster to all subject matter.

   MEAS: Same as VIII-A-1.

   EPS: Each plan will contain at least one statement relating its cluster to subject matter areas.

B. Counselors are aware of occupational trends and job choices.

1. Each counselor is aware of the cluster areas available.

   MEAS: A questionnaire administered to all grade 11 and 12 counselors at a counselor meetings.

   EPS: Each counselor shall list at least 75% of the cluster areas available.

2. Each counselor is aware of occupations represented by each cluster.

MEAS: Same as VII-B-1.

EPS: Each counselor shall list at least five occupations in each cluster area of which he is knowledgeable.

3. Each counselor is aware of employment opportunity trends in each cluster.

MEAS: Same as VIII-B-1.

EPS: Each counselor shall list at least one employment opportunity trend in each cluster area of which he is knowledgeable.

C. Community members have been actively involved in cluster activities.

1. Community members are used in school cluster activities.

MEAS: Same as VIII-A-1.

EPS: At least one community resource used in each plan.

2. Community members are providing work experience stations for students.

MEAS: A questionnaire administered to a sample of 100 students with work experience, grade 12 level.

EPS: At least 50% will indicate that they have been offered work experience at a station in the David Douglas community.

VIGOR Management

IX. Management provides planning and support services to David Douglas staff through the project.

A. David Douglas has designed a process to continue Career Education after the term of VIGOR Federal funding has expired.

1. David Douglas will provide an overall Career Education program advisory committee representative of community, administration, teachers, counselors and students.

MEAS: A Superintendent-approved planning document for the future of David Douglas Career Education.

EPS: Statements supporting this action plan appear in the document.

2. Long-range plans have been created for a career education program at all program levels.

MEAS: Same as IX-A-1.

EPS: Same as IX-A-1.

3. David Douglas will provide an overall program director and a district-wide staff coordinator for programs at each level.

   MEAS: Same as IX-A-1.

   EPS: Same as IX-A-1.

4. David Douglas will provide for the current Guidance & Counseling process to be reoriented to a career development and decision-making focus.

   MEAS: Same as IX-A-1.

   EPS: Same as IX-A-1.

5. David Douglas will provide an on-going assessment system which is student-outcome based.

   MEAS: Same as IX-A-1.

   EPS: Same as IX-A-1.

6. David Douglas will provide a secondary to post-secondary articulation plan so that community colleges know the points at which their various clusters contact David Douglas clusters.

   MEAS: Same as IX-A-1.

   EPS: Same as IX-A-1.

7. David Douglas will provide a useful graduate follow-up system that is designed on a long-term (at least 10 years) basis.

   MEAS: Same as IX-A-1.

   EPS: Same as IX-A-1.

B. There is broad-based staff and student support in the district for Career Education.

1. There are curriculum guides and materials for teachers, administrators, counselors, building coordinators and students at the levels of awareness, exploration and preparation.

   MEAS: All guides prepared by VIGOR.

   EPS: In a matrix of levels vs. type of person, each cell shall have had at least one piece of material developed for it.

2. There is a plan for a student placement system.

   MEAS: Same as IX-A-1.

   EPS: Same as IX-A-1.

3. Staff and students are better able to identify a relationship to Career Education.

   MEAS: Summary of evidence gained through interviews, tests and questionnaires administered for the annual evaluation.

   EPS: A definite pattern of knowledge of an attitude of relationship to career education as determined by the evaluators.

FINDINGS

The following findings of the evaluation are presented in two sections. The first shows the information on the format prescribed by the evaluation design. Information and data from questionnaire documents, tests and interviews is recorded for each goal area. The statistical data are displayed in narrative form within the context of the "treatment and results" portion for each of the nine goals, as well as in table form as shown in "Tables of Results", Appendix A.

The second section is a summary of findings organized against the seven project components. This is a brief synthesis of the overall findings provided in this form to assist project administrators in reviewing findings in light of the original proposal structure.

OBJECTIVE I: STUDENTS ARE MORE AWARE OF THEMSELVES THROUGH THE PROJECT.

A. Grade 3 students are better able to identify career attributes about themselves.

1. The student can state why he is unique and how his uniqueness applies to the world of work, more often at David Douglas than at control.

MEASURE(MEAS:): A questionnaire administered to a sample of 100 experimental and 100 control students, Grade 3 level.

EXPECTED PERFORMANCE STANDARD(EPS:): The proportion of experimental correct responses will be higher than control responses, at the 5% level of significance.

Treatment and Results

The questionnaire (Document A) was administered to 100 David Douglas third grade students and 90 control school third grade students. Of the David Douglas sample, 85% passed this measure while 88.9% of control students passed. The z-test for difference was -0.74 indicating no significant difference between the experimental and control schools, thus the expected performance standard (EPS) was not met on this item. (Table I)

2. The student can identify some job that requires individual operation and that other work requires operating with a group more often at David Douglas than at control.

MEAS: Same as I-A-1 above.

EPS: Same as I-A-1 above.

Treatment and Results

One hundred David Douglas and 90 control third grade students responded. Fifty-nine percent of David Douglas and 50% of control achieved a passing score. The z-test for difference was 1.24; the EPS was not met on this

item. (Table I)

B. Grade 6 students are better able to make cluster choices based on information about themselves.

1. The student chooses one or more clusters for exploration more often at David Douglas than at control.

MEAS: A questionnaire administered to a sample of 100 experimental and 100 control students, grade 6 level.

EPS: Same as I-A-1 above.

Treatment and Results

The questionnaire (Document B) was administered to 100 David Douglas sixth grade students and 99 control school sixth grade students. Of the David Douglas sample, 75% passed this measure while 73.7% of control students passed. The z-test for difference was 0.16 indicating no significant difference between the experimental and control schools, thus the expected performance standard (EPS) was not met on this item. (Table I)

2. The student can describe attributes of himself in making that choice more often at David Douglas than at control.

MEAS: Same as I-B-1.

EPS: Same as I-B-1.

Treatment and Results

One hundred David Douglas and 99 control sixth grade students responded. Sixty-six percent of David Douglas and 69.7% of control achieved a passing score. The z-test for difference was -0.60; the EPS was not met on this item. (Table I)

Third and sixth grade students are able to identify career attributes about themselves or make cluster choices based on information about themselves at approximately a minimum 60% level. To this degree students are more aware of themselves through the project.

At the same time, there is no significant difference between David Douglas students and a control group that has not gone through a career education program. Unless there is some factor in the selection of the control group such as higher ability, the project has not so far caused a significant degree of self awareness over normal.**

**Scorer indicates there may be some difference in reading and writing skills between David Douglas and control.

OBJECTIVE II: STUDENTS ARE MORE AWARE OF THE WORLD OF WORK THROUGH THE PROJECT.

A. Grade 3 students are better able to identify that jobs have different requirements.

1. The student can identify more jobs at David Douglas than at control.

MEAS: Same as I-A-1.

EPS: The mean number of jobs identified at David Douglas will be higher than the mean number of jobs identified at control, at the 5% level of significance.

Treatment and Results

One hundred David Douglas and 90 control students responded. (Document A) The Mean number of correct responses for David Douglas was 4.21 and for control 3.62 with a standard deviation of 3.27 for David Douglas and 2.45 for control. The t-test for difference between means was 1.40, while the F-test for difference between variances was 1.79 which is significant at a 1.0 level. The Expected Performance Standard was not met as stated. However, while the higher average number of jobs stated at David Douglas is not statistically significantly different from the average number of jobs stated at control, the variances are significantly different. This indicates that the range of naming quantities is much wider at David Douglas than control.

By adding and subtracting an SD around the respective mean, it can be stated that when asked to do this assignment, 2/3 of the David Douglas third graders name from 1 to 7.5 jobs, while 2/3 of the control third graders name from 1 to 6 jobs. (Table II)

2. The student can state the difference between two jobs more often at David Douglas than at control.

MEAS: Same as I-A-1.

EPS: Same as I-A-1.

Treatment and Results

One hundred David Douglas and 90 control sixth grade students responded. Seventy eight percent of David Douglas and 80.2% of control achieved a passing score. The z-test for difference was -0.73; the EPS was not met on this item. (Table II, Page 41).

B. Grade 6 students can better identify a family of jobs (cluster) and a major occupation in that family.

1. The student correctly relates a given job to its proper family (cluster) more often at David Douglas than at control.

MEAS: Same as I-B-1.

EPS: Same as I-B-1.

Treatment and Results

The questionnaire (Document B) was administered to 100 David Douglas sixth grade students and 98 control school sixth grade students. Of the David Douglas sample, 17% passed this measure while 22.5% of control students passed. The z-test for difference was -0.96 indicating no significant difference between the experimental and control schools, thus the expected performance standard (EPS) was not met on this item. (Table II)

2. The students can make a correct statement of the service performed in that given job more often at David Douglas than at control.

   MEAS: Same as I-B-1.

   EPS: Same as I-B-1.

Treatment and Results

One hundred David Douglas and 98 control sixth grade students responded. Ninety three percent of David Douglas and 91.8% of control achieved a passing score. The z-test for difference was 0.31; the EPS was not met on this item. (Table II), Page 41).

Third grade students at David Douglas demonstrate a wider range of ability to name jobs than at control. But otherwise there is no evidence that the project has caused a significant degree of awareness of the world of work over normal. (Same cautions as in Objective I regarding abilities apply.)

A fairly low number of students at David Douglas in grade 6 can relate a random job title to its proper family (cluster) which was predicted by the project Director in objection to that item when the evaluation plan was reviewed by him.

OBJECTIVE III: THE DAVID DOUGLAS STAFF PROVIDES CAREER AWARENESS EXPERIENCES TO STUDENTS IN AN INTEGRATED FASHION.

A. Teachers have developed plans for career awareness activities and have implemented them.

   1. Teachers have actively recruited resource personnel representing the spectrum of jobs in the community for in-class discussion of occupations.

      MEAS: A sample of 10 teacher plans per grade.

      EPS: Each plan will contain at least 3 projected uses of community resources, 2 of which will represent different clusters and income levels.

Treatment and Results

Interviews with the sample of teachers revealed considerable effort on their part to involve community resources in the career education program. The EPS for this item was met at a 100% level. (Table III)

2. Teachers have implemented plans by having these speakers appear in class.

   MEAS: A sample of 10 teacher activity reports.

   EPS: At least 21 of the 30 expected speakers will have spoken in class.

Results

Interviews with teachers and reviews of their plans indicate a high level of use of resource speakers in class. The EPS was met on this item, even though specific activity reports were not in great evidence. (Table III)

3. Teachers have related specific examples of curriculum material to career awareness.

   MEAS: Same as III-A-1.

   EPS: At least 10 teacher plans contain at least one such example.

Treatment and Results

Teachers appear to be integrating career education concepts into regular instructional program materials, as evidenced by interviews and review of plans. The EPS was met at a 100% level. (Table III)

B. Counselors have better provided career awareness activities.

1. Counselors have provided more individual and group career awareness activities at David Douglas than at control.

   MEAS/EPS1: Same as I-B-1.

   EPS2: At least 80% of the David Douglas students will describe some career awareness experience conducted by the school counselor.

Treatment and Results

One hundred David Douglas and 98 control students responded. Only 1.0% of David Douglas were judged to pass, while 5.1% of control students passed. The z-test for difference was -1.68. The EPS was not met for either item. There were two expected performances for this action plan. The first dealt with the comparison between David Douglas and control. The control group indicates significantly more counselor provision of career awareness than control.

However, this finding is suspect because of the low numbers involved. It should be certified that there are indeed counselors in the control elementary schools. The second performance standard was that 80% of the David Douglas students would state they received counselor assistance in career awareness. This was obviously not met.

C. Building coordinators have provided career awareness activities.

1. Building coordinators have coordinated career awareness activities for the staff.

MEAS: A questionnaire to a sample of 10 teachers and 5 administrators.

EPS: At least 80% of the persons will cite an example of the Building Coordinator having coordinated an activity.

Results

It was found that building coordination at this level is handled by two building principals, each responsible for 5 elementary buildings. Each has worked closely with teachers, counselors, and administrators at their respective buildings, and have stimulated and coordinated a large number of activities. The EPS for this item was met at a 100% level. (Table III)

2. Building coordinators have provided a guide for integrating the elementary curriculum with career awareness.

MEAS: Building coordinator guides.

EPS: Each of the Building Coordinator's will have produced a guide.

Results

Each of the two awareness coordinators has a guide which is used in working with teachers and administrators in the 5 buildings for which each is responsible. The EPS was met on this item at a 100% level.

Teachers, at 100% level, seem to have planned for many career awareness experiences, having used the building coordinators who in turn have provided guides for the integrating task.

OBJECTIVE IV: STUDENTS EXPLORE APPROPRIATE CAREERS THROUGH THE PROJECT.

A. Grade 8 students can better indicate tentative cluster choices (including not having made a specific choice).

1. The student states a plan and reasons therefor for exploring or not exploring one or more clusters more often at David Douglas than at control.

MEAS: A questionnaire administered to a sample of 100 experimental and 100 control students, 8th grade level.

EPS: Same as I-A-1.

Treatment and Results

The questionnaire (Document CD) was administered to 97 David Douglas eighth grade students and 96 control school eighth grade students. Of the David Douglas sample, 85.6% passed this measure while 79.2% of control students passed. The z-test for difference was 1.06 indicating no significant differences between the experimental and control schools, thus the expected performance standard (EPS) was not met on this item. (Table IV)

B. Grade 8 students can better narrow their choice to one or two clusters based on understanding of self.

1. The student gives an example of the career selection process more often at David Douglas than at control.

MEAS: Same as IV-A-1.

EPS: Same as IV-A-1.

Treatment and Results

The questionnaire (Document CD) was administered to 97 David Douglas eighth grade students and 96 control school eighth grade students. Of the David Douglas sample, 76.3% passed this measure while 90.6% of control students passed. The z-test for difference was -2.44 indicating a reverse significant difference between the experimental and control schools, thus the expected performance standard (EPS) was not met on this item. (Table IV)

C. Grade 8 students have had a field experience in one or more occupations.

1. The student has spent at least 3 days total outside the classroom on one or more jobs or in job settings.

MEAS: A questionnaire administered to a sample of 100 students, 8th grade level.

EPS: At least 80% of the students will have spent at least 3 days outside the classroom on a job.

Treatment and Results

Of the 97 David Douglas students responding 19.6% indicated that they had spent at least 3 days outside the classroom on a job. However, a much larger number (approximately 60%) indicated having at least one day outside the classroom in at least a work observation setting. This was typically with a parent or other relative. The expected performance standard of 80% was not met on this item. (Table IV)

D. Grade 8 students have been exposed to the basic skills required of their chosen cluster.

1. The student has spent at least 3 days outside the classroom on a job or in a job setting in his chosen cluster.

   MEAS: Same as IV-C-1.

   EPS: At least 40% of the students will have spent at least 3 days outside the classroom on a job or in a job setting in his chosen cluster.

Treatment and Results

Of the 97 David Douglas students responding 32% indicated that the job experience outside the classroom was closely related to a chosen cluster. This was very close to the expected percentage of 40% but the Expected Standard Performance was not met in this item. (Table IV)

As in grades 3 and 6, eighth graders show themselves to have explored appropriate careers in some fashion but not to a greater degree through the project than at control.

These questions were originally written to apply at grade 10. The grade was changed to 8 because this was the time at which "career exploration" was focused upon by David Douglas. The work experience aspect was probably greatly affected by this change in terms of 13-year-olds getting work experience.

While performance standard D-1 was not precisely met, it is a healthy trend that students were, when getting work experience, involved in their chosen cluster areas.

OBJECTIVE V: THE DAVID DOUGLAS STAFF PROVIDES CAREER EXPLORATION EXPERIENCES TO THE STUDENTS IN AN INTEGRATED FASHION THROUGH THE PROJECT.

A. Teachers and counselors have integrated subject matter content with career exploration goals.

   1. The staff member has a written plan for relating his subject matter content (counseling) to career exploration.

      MEAS: A sample of 10 teacher plans and 2 counselor plans.

      EPS: Each plan will contain at least 1 statement relating subject matter to career exploration.

Results

Of the 10 teacher plans and the two counselor plans reviewed, only 5 indicated a specific written provision for relating subject matter to career exploration. However, all staff interviewed indicated that such activities are being carried out as a part of the regular program even though they do not have specific written plans. On the basis of the EPS, the objective was not met. (Table V)

2. Teachers and counselors have provided alternative choices to individual student program planning.

   MEAS: A questionnaire administered to a sample of 100 teachers and students.

   EPS: At least 80% of the teachers and 80% of the students will cite at least one specific example of an alternative choice being provided.

Treatment and Results

A total of 60 students and 14 teachers responded to questionnaires (Documents G and G2). Of the 14 teachers, 35.7% indicated meetings the objective while 58.3% of the students responded affirmately.

Note that a substantially higher percentage of students received help than staff stated they gave help. The student responses indicate that, when helped, it was from counselors. When tied to objective VIII there may be an indication that career assistance is left in the hands of the very knowledgeable counselors.

The following was also tabulated for students who didn't give an indication of assistance:

Reason	Pct. of not pass student group
Didn't get any help at all	52.0%
Didn't ask for any help	32.0%
Unrelated or garbled answers	8.0%
Refused to answer	8.0%

If the second group, "didn't ask for any help" is removed from the student sample, then the number of students is 52 and the percent passed is 67.3%--still under the expected performance standard. (Table V)

B. Community resources have been actively involved in career exploration activities.

1. Community resources have been used in classroom activities.

   MEAS: Same as V-A-1.

   EPS: At least one community resource used in each plan.

Results

Of the 10 teacher plans reviewed, 8 included the written references to use of community resources. Again, all respondents indicated either through interviews or in written form that they were using community resources of various kinds. However, the Expected Performance Standard of 100% was not met on this item. (Table V)

2. Community resources have provided student work experiences.

   MEAS: Same as IV-C-1.

   EPS: At least 25 jobs will have been located in the David Douglas community.

Results

Ninety seven student responses indicated that at least 29 jobs have been provided them as student work experiences. The Expected Performance Standard of 25 jobs located in the community was met on this item. (Table V)

While about half of teachers indicate they plan for exploration experiences, both teachers and students at the 8th grade level indicate a low level of providing them interactively. The statistics gathered indicate that when students do get some information, it is primarily from counselors.

A larger percentage of teachers use outside resources. The community responds with job stations.

A trend to research from this and other objectives is whether or not teachers really know "how to involve career education in their teaching" beyond the basic levels of providing speakers, field trips, and basic relationships between subject matter and careers.

OBJECTIVE VI: CLUSTER PROGRAMS ARE PROVIDED FOR STUDENTS THROUGH THE PROJECT.

A. Each cluster follows Oregon state guidelines.

1. Each cluster has a certified instructor.

MEAS: A description of the David Douglas cluster program.

EPS: The certified instructor is identified for each cluster.

Results

A certified instructor is identified for each cluster program at David Douglas. The EPS was met on this item.

2i. Each cluster has an active advisory committee.

MEAS: Same as VI-A-1.

EPS: The names of the advisory committee members are listed.

Results

List of names of advisory committee members are on file in the VIGOR office and with each cluster instructor. The EPS was met on this item.

2ii. Each cluster has an active advisory committee.

MEAS: Minutes of 1972-73 advisory committee meetings.

EPS: Each committee shall have met at least once this school year.

Results

All but one advisory committee met this year. However, all cluster instructors indicated contacting, consulting, and working with committee members on an individual basis throughout the year. Some instructors indicated in interviews that they felt some lack of knowledge in working with such committees. The EPS was not met on this item.

3. Each cluster has physical facilities to implement it.

   MEAS: Same as VI-A-1.

   EPS: At least 9 of the clusters have sufficient physical facilities.

Results

On the basis of interviews with cluster instructors and project administrators, it was determined that most of the clusters are operating in adequate facilities. However, the electronics cluster is crowded for storage space and work stations, and the Horticulture cluster needs more outside area for lath house and storage. The metals and mechanics cluster facilities have been improved considerably over the past year, although some equipment is still needed in some areas. Possibly the best equipped cluster areas are the Food Service and Office Occupation areas. The EPS was met on this item.

4. Each cluster has an approved program plan.

   MEAS: Same as VI-A-1.

   EPS: At least 9 of the clusters have an approved program plan.

Results

All cluster programs operate under a local and state approved program plan. The EPS was met on this item.

B. Cluster course content incorporates the OBE instruction guides.

1. Skills and knowledge are being taught in each cluster.

   MEAS: The David Douglas cluster guides.

   EPS: At least 80% of skills and knowledges listed in each guide are incorporated in the David Douglas course content.

Results

Interviews with cluster instructors indicate that the State Department of Education Cluster Guides are used to varying extents in each program. The electronics instructor has developed a comprehensive guide of his own, but incorporates many of the basic concepts, skills and knowledges suggested in the state guide. It is noteworthy that the state guides are used as "guides" and not as lesson plans, as is their intention. The expected performance standard was met on this item.

No tables are provided since the performance standard was passed at the 100% level for all clusters except in one case

All clusters follow state guidelines. All have established advisory committees. All the committees but one have met at least once this year. Each cluster has been provided with physical facilities, has an approved program plan, and implements SDE instruction guides in its content.

OBJECTIVE VII: STUDENTS HAVE OPPORTUNITIES TO WORK IN A CLUSTER AREA IN GRADES 11 AND 12 IN ORDER TO BE EMPLOYED OR CONTINUE TRAINING AFTER GRADUATION THROUGH THE PROJECT.

A. Students are pursuing career choices in cluster curriculum more often now than in 1969-70.

1. More students in grades 11 and 12 are enrolled in a cluster program now than in 1969-70.

MEAS: Enrollment figures for 1969-70 and this year.

EPS: Percent of total 1972-73 student body enrolled in clusters is higher than same percent for 1969-70, at 5% level of significance.

2. The number of students enrolled in each cluster has increased.

MEAS: Enrollment figures for each cluster for all years 1969-70 through 1972-73.

EPS: The number of students in each cluster shall have increased each year.

Treatment and Results

In 1969-70 an estimated 1000 students were enrolled in the school. Of the 1000, 0.0% were enrolled in cluster classes. In 1972-73, the enrollment figure is 1152. Of the 1152 students, 45.1% are enrolled in cluster classes. The z-test for difference was 49.59. Objective VII-A-1 was met and VII-A-2 was not met.

There are 12 clusters listed for the school. Eight of them (67%) have shown an increase, which includes additional persons since inception. Only 1 of the 4 (25%) that have been in existence for all four years has shown a constant increase.

Of the 33% of the 12 clusters that did not show an increase, two can probably be attributed to chance--Child Services and Electronics. Mechanics tripled from 58 students in 1969-70 to 194 students the following year and has now fallen this year to 54 students--the approximate 1969-70 level. The only major concern is the Clerical cluster which increased from 58 students to 62 students between 69-70 and 70-71 and has fallen to an enrollment of 35 in 1972-72. (Table VI)

B. Students in the cluster curriculum for grades 11 and 12 stay in school.

1. Students enrolled in clusters drop out of school less than students not enrolled in clusters.

MEAS: Grade 11 and 12 dropout figures for 1972-73, with each such student identified as having or not having been enrolled in a cluster.

EPS: Percent of cluster-enrolled drop-out students is lower than percent of non-cluster-enrolled drop-out students, at 5% level of significance.

Treatment and Results

At David Douglas, there are 517 students enrolled in cluster classes and 872 David Douglas non-cluster students. Of the 517 cluster students, the percentage of students dropping out is 5.8%. Of the non-cluster students, 9.6% have dropped out. The z-test for difference was -0.65, indicating no significant difference between the cluster students and the non-cluster students, thus the expected performance standard (EPS) was not met on this item. (Table VII)

C. Graduates are pursuing employment or additional training in the area for which they were involved in a cluster.

1. 1971-72 graduates show greater involvement in their high school area of training at David Douglas than at control.

MEAS: A questionnaire administered to 100 cluster graduates of David Douglas and 100 graduates of control.

EPS: Percent of David Douglas respondents will show greater involvement than percent of control respondents, at 5% level of significance.

Treatment and Results

The questionnaire (Document E) was administered to 50 David Douglas graduate students and 33 control school graduate students. Of the David Douglas sample, 84.0% passed this measure while 45.5% of control students passed. The z-test for difference was 3.70 indicating that the EPS on this item was met. (Table VIII)

2. Students achieve competencies related to the clusters they are in.

MEAS: Teacher competency test given to a sample of 100 cluster students randomly selected from all David Douglas cluster programs.

EPS: 80% of the students will score at or above the 75% level on the competency test.

Treatment and Results

Cluster teachers rated a total of 94 cluster students as to whether or not 75% mastery of instructional content had been achieved. Of the 94 rated, 86.2% passed the minimum level set which exceeds the expected percentaged of 80% passing. Therefore, the EPS was met on this item.

Of the 12 cluster teachers who did the rating, 5 submitted examples of the mastery documents or tests which they used to rate the students. There was such test evidence for 58 of the students rated and no test evidence provided from teachers rating 36 of the students. Where test evidence was submitted, the percentage of students achieving 75% mastery or more was 94.8%. Where no test evidence was submitted, the percentage passing, according to the instructor rating, was only 72.2%. Thus, it was found that teachers supplying evidence of such mastery tests had a considerably higher percentage of students who mastered the competency than those who did not supply evidence of having such tests. (Table VIII)

D. Students have been more involved in cooperative work experiences (CWE).

1. There is an increase in the number of students in CWE each year since 1969-70.

MEAS: Cluster and CWE figures for each year since 1969-70.

EPS: Percent of cluster students in CWE will increase each year since 1969-70.

Treatment and Results

Of 142 students enrolled in cluster programs in 1970-71, 18.3% were enrolled in cooperative work experience programs. In 1971-72, the number of students enrolled in cluster programs had quadrupled to 534. During that second year of the project, 12.0% were involved in cooperative work experience. In 1972-73 there were 520 students enrolled in cluster programs with 18.7% in a cooperative work experience program. Even though the standard is not met in terms of pure percentages, the EPS for this item is considered met because, with the quadrupled increased of cluster students from 1970-71 to 1971-72 the cooperative work experience stations did increase numerically. The number increased again the next year to the point that the percentage of students involved is the same as 1970-71. The number of work stations increased 273%. (Table IX)

The general trend is that cluster opportunities are available for students in grades 11 and 12. They have been on the increase since the program's inception, although not in a smooth fashion.

Cluster dropout rate is not significantly different than the non-cluster dropout rate, which may just reinforce the whole concept for the need of career education in the early grades. (The students studied did not have such experiences.) At the same time, cluster graduates have a significantly higher positive attitude towards their schooling than either David Douglas non-cluster students or students at control.

OBJECTIVE VIII: DAVID DOUGLAS STAFF PROVIDE INTEGRATED CAREER EXPERIENCES IN GRADES 11 AND 12 THROUGH THE PROJECT.

A. Cluster and academic teachers have integrated program content towards career cluster goals.

1. Each cluster and academic teacher has a written plan for relating his subject matter to all clusters.

MEAS: A sample of 14 academic and 12 cluster teacher plans for cluster instruction.

EPS: Each plan will contain at least one statement relating its subject matter to clusters.

Results

Interviews with the selected teachers revealed that, while many had some written plans for relating subject matter to careers, not all had such specific evidence of direction. The expected performance standard was not met for this item, but all cluster teachers and about half the non-cluster teachers had such plans. (Table X)

2. Each cluster and academic teacher has a plan for relating subject matter to clusters.

MEAS: Same as VIII-A-1.

EPS: Each plan will contain at least one statement relatings its cluster to subject matter areas.

Results

As with A.1 above, written plans are scarce. Most teachers interviewed, however, indicate some planning in this direction, a considerable change over last year. The expected performance standard was not met on this item. (Table X)

B. Counselors are aware of occupational trends and job choices.

1. Each counselor is aware of the cluster areas available.

MEAS: A questionnaire administered to all grade 11 and 12 counselors at a counselor meeting.

EPS: Each counselor shall list at least 75% of the cluster areas available.

Results

This objective was met at a very high level. Counselors exhibit a broad knowledge of cluster programs, trends, and jobs.

2. Each counselor is aware of occupations represented by each cluster.

   MEAS: Same as VII-B-1.

   EPS: Each counselor shall list at least five occupations in each cluster area of which he is knowledgeable.

Results

All but two counselors were able to list at least five specific, related jobs for each cluster they identified. The expected performance standard was met a high level. (Table X)

3. Each counselor is aware of employment opportunity trends in each cluster.

   MEAS: Same as VIII-B-1.

   EPS: Each counselor shall list at least one employment opportunity trend in each cluster area of which he is knowledgeable.

Results

Every counselor was able to identify employment opportunity trends for clusters each identified. The expected performance standard was met at a very high level.

C. Community members have been actively involved in cluster activities.

1. Community members are used in school cluster activities.

   MEAS: Same as VIII-A-1.

   EPS: At least one community resource used in each plan.

Results

Use of community resources is occurring at a significant level throughout the 11-12 grade program, by both cluster and non-cluster teachers. Expected performance standard was met on this item. (Table X)

2. Community members are providing work experience stations for students.

   MEAS: A questionnaire administered to a sample of 100 students with work experience, grade 12 level.

   EPS: At least 50% will indicate that they have been offered work experience at a station in the David Douglas community.

Results

Well over 50% of the sample indicated participation in a work experience program. The expected performance standard was met on this item. (Table X)

The counselors are extremely knowledgeable about career information, having passed with flying colors a most difficult performance standard. Cluster teachers have all tried to integrate subject matter with their clusters, most also doing the reverse. Academic teachers have been slower to do this, although a majority do give evidence of having done both.

Teachers plan to use community resources in their career work completely. The community has responded quite well in providing work stations for the students.

In conjunction with objectives III and V, it would appear the general trend of career education is partially integrated, but not near completion. The higher one moves from grade 1 to 12, the more reliance there is for career experience and information from counselors and the less there is on teachers. However, about half the teachers seem to be involved at the higher grade levels and this may be an indication that integration by teachers of career experiences is partial and that with more time it may be complete.

OBJECTIVE IX: MANAGEMENT PROVIDES PLANNING AND SUPPORT SERVICES TO DAVID DOUGLAS STAFF THROUGH THE PROJECT.

A. David Douglas has designed a process to continue Career Education after the term of VIGOR Federal funding has expired.

1. David Douglas will provide an overall Career Education program advisory committee representative of community, administration, teachers, counselors and students.

MEAS: A Superintendent-approved planning document for the future of David Douglas Career Education.

EPS: Statements supporting this action plan appear in the document.

Results

An overall career education advisory committee of seven members including community, administration, teacher, counselor and student representatives is established and operational. In addition, there exists an advisory committee for each of 12 cluster programs, an advisory committee for career awareness programs, one for career exploratory programs, one for work experience programs, one for public relations and one for academic programs. A total of 175 persons are involved in these advisory groups.

Approved documents exist in the form of a current five-year plan, a statement of goals, objectives, and philosophy of career education (also found in the third interim report), and a formal local board of education approval statement on the original project proposal. All of these documents have advisory committee, Superintendent and local board approval. The expected performance standard is met for this item.

2. Long-range plans have been created for a career education program at all program levels.

MEAS: Same as IX-A-1.

EPS: Same as IX-A-1.

Results

The project and total career education program of the district currently operate under a long-range plan which terminates this year. A new five-year district wide plan is currently under development. This plan will cover all phases and dimensions of career education in the district, and will be approved by the overall advisory committee, Superintendent, and the local board of education. The expected performance standard is met for this item.

3. David Douglas will provide an overall program director and a district-wide staff coordinator for programs at each level.

MEAS: Same as IX-A-1.

EPS: Same as IX-A-1.

Results

Plans for the coming year include the following staff assignments and/or provisions for assignment of personnel at each program level:

District Director of Pupil Personnel Services and Career Education - Dr. Omer McCaleb

Vice Principal for Secondary Career Education Programs - Mr. Stan Gaumer

Secondary Work Experience Coordinator - Mr. Pat Cline

Career Exploratory District Coordinator - Mr. Dean Griffith

Middle School Career Exploration Coordinators -
(one-half time positions) - Ms. Judy Fosse, Floyd Light MS
- To be assigned, Gilbert MS

Elementary Career Awareness Coordinators -
(each responsible for 5 schools) - Mr. Joe Lelinski
- Mr. Harold Edwards

Follow-up progra specialist - One-half time person to be selected.

All positions described above are provided for in the 1973-74 district budget The expected performance standard is met for this item.

4. David Douglas will provide for the current Guidance & Counseling process to be reoriented to a career development and decision-making focus.

MEAS: Same as IX-A-1.

EPS: Same as IX-A-1.

Results

It is significant in regard to guidance and counseling that the former Project Director, Dr. McCaleb, has been assigned as district director of Pupil Personnel Services (Guidance and Counseling) and Career Education. This is seen by the evaluators to be a positive and highly visible intention on the part of the district to continue to move toward career oriented guidance and counseling systems throughout the district. From the base of an extremely knowledgeable counseling staff at the secondary level, and with the availability of experienced counselors who are already doing what appears to be an effective job of providing career awareness and exploratory information, services and experiences at earlier levels, it is expected that this objective will continue to be met at a high level. This area is considered by the evaluators to be a high strength area of the total project, and the future for it appears bright. Documents supporting these plans include the goals, objectives, and philosophy statements and the current and planned long-range plans. The expected performance standard is met for this item.

5. David Douglas will provide an on-going assessment system which is student-outcome based.

   MEAS: Same as IX-A-1.

   EPS: Same as IX-A-1.

Results

The current long-range plan, and the new five year plan which is presently in draft form both contain substantial references to "regular intervals of assessment, evaluation, feed-back and modification" of program development and operation at all levels. These documents either are now or will be approved by the advisory committee, Superintendent and local board of education. The long-range career education plan is also subject to approval by the State Department of Education and the Oregon Board of Education. The expected performance plan was met for this item.

6. David Douglas will provide a secondary to post-secondary articulation plan so that community colleges know the points at which their various clusters contact David Douglas clusters.

   MEAS: Same as IX-A-1.

   EPS: Same as IX-A-1.

Results

A brief reference to articulation is included in the present long-range plan. A major dimension of the new five-year plan deals with articulation between secondary programs at David Douglas and area community colleges, of which there are three. There is currently a 0.2 FTE staff effort directed to the articulation dimension of the project. Approximately one-fifth of the time of the exploratory program coordinator is devoted to working with the three community colleges,

arranging and conducting articulation planning meetings, arranging for high school cluster instructors to visit community college programs and for community college instructors to visit high school programs. While this aspect of the project has not been conducted as a major effort, there is evidence of some attention to the problems of articulation, and definite plans for an increased emphasis in this area within the new long-range plan for career education. The expected performance standard is considered to be met for this item.

7. David Douglas will provide a useful graduate follow-up system that is designed on a long-term (at least 10 years) basis.

   MEAS: Same as IX-A-1.

   EPS: Same as IX-A-1.

Results

A graduate follow-up system is operational in the district and is in the second year of formal operation. Some data utilized in other sections of this report were taken from information gathered through this system on 1972 graduates of the David Douglas high school. The program is one of only eight or ten which is operational in the state, and has been included as part of a pilot project to develop a state-wide follow-up system through the State Department of Education.

The follow-up system is documented in the current operational plan of the district and is also included as a major area of work in the new long-range plan currently under development. The expected performance standard is met this item.

B. There is broad-based staff and student support in the district for Career Education.

1. There are curriculum guides and materials for teachers, administrators, counselors, building coordinators and students at the levels of awareness, exploration and preparation.

   MEAS: All guides prepared by VIGOR.

   EPS: In a matrix of levels vs. type of person, each cell shall have had at least one piece of material developed for it.

Results

Curriculum and planning guides, descriptive brochures, student oriented lesson materials, activity folders and related materials exist for all program levels and all personnel involved. The development of this materials and information is attributable in its entirety to the intervention of Project VIGOR. Interviews with teachers, counselors and administrators reveal that such materials are broadly used throughout the school system, and that persons using the material had substantial involvement in its development.

A matrix showing the existance of such material is shown as Figure 2.

The expected performance standard for this item is met.

2. There is a plan for a student placement system.

   MEAS: Same as IX-A-1.

   EPS: Same as IX-A-1.

Results

Plans for a basic student placement system are included in the new five-year long-range plan for career education in the district. The project director has indicated to the evaluators that this effort will require planning and development for a major new dimension of the total program. Only limited planning has been accomplished to date, which is to be expected in a project which was basically developmental in nature. The major project effort in development of cluster preparation programs for students which will result in placeable learners has been the priority emphasis. For the first time, it appears, the project can realistically deal with the issue of a placement system, since it is now producing, through the program, a human product with the competencies to get and hold a job or take the next educational step. The expected performance standard is considered to be met for this item.

3. Staff and students are better able to identify a relationship to Career Education.

   MEAS: Summary of evidence gained through interviews, tests and questionnaires administered for the annual evaluation.

   EPS: A definite pattern of knowledge of an attitude of relationship to career education as determined by the evaluators.

Results

A review of findings presented above indicates that there is considerable evidence which indicates that students and staff are better able to identify a relationship to, knowledge of and positive attitude toward career education than they were one year ago. This finding is particulary true of staff members throughout the system, and perhaps most significantly, of counselors. In reviewing results of the 1971-72 evaluation, which was concerned primarily with assessment of staff attitude and knowledge of career education, it is evident that a definite pattern of improvement of staff responsiveness to and involvement in career education has developed. More staff are participating actively in career development activities at all levels, according to their personal assessment and as reflected in responses of students. Counselors, especially at the secondary level, evidence a high degree of knowledge of career cluster programs, and of the career education concept. Students, as well, at all levels appear to evidence a positive attitude toward career education activities in which they have been involved. Even though in most cases there was not a significant difference between responses of students at David Douglas and students at the control school to questionnaires, there is sufficent evidence available to suggest that a positive growth pattern in terms of student attitude and knowledge is developing. Most, if not all of this result must be attributed directly to the influence of the project, at all levels. The expected performance standard is considered to be met for this item.

FIGURE 2

MATERIALS AND INFORMATION DEVELOPED

THROUGH THE PROJECT

Type of Person

Level	Student	Teacher	Coordinator	Administrator
Awareness Grades 1-6	Learning materials for each grade - All areas.	Instructional Guide; Teacher Guides; Materials and Activities Guides	Coordinators Handbook	Long-Range Plan, District Goals, Objectives & Philosophy VIGOR proposal and plan of operation
Exploratory Grades 7-10	Learning materials, supplies, equipment, All areas; CRUISE program; GOAL program	Curriculum guide to SUTOE; CRUISE guide	Curriculum guides; Handbook; Brochures	Long-Range Plan. District Goals, Objectives & Philosophy VIGOR plan of operation Cluster Info. Brochures
Preparatory Grades 11-12	Learning materials, laboratories; self-instruction materials, supplies, equipment.	Cluster guides and Department Guides	Secondary program plan; cluster guides; Work Experience Guide	Present and New Long-Range plans; VIGOR plan of operation Cluster brochures

SUMMARY OF FINDINGS

I - Component 00 - Awareness

Student outcome measures indicate an ability to identify self-interests and an awareness of a fairly broad range of occupations. Teacher responses indicate considerable activity at the elementary level in integrating career development concepts through existing instructional areas. Availability of supplies, materials and ideas appear to be adequate. Several teachers indicated a need for more time with building coordinators to further develop plans and activities. The leaders and curriculum activities and products identified a year ago appear to have exerted a fairly strong influence on further developments at this level. The prognosis for future development and further implementation of the career development theme at the elementary level was found to be good.

II - Component 10 - Exploration

Student outcome measures indicate a reasonably high degree of involvement in exploratory experiences of various kinds in grades 7 through 9. Student knowledge of and use of resources appears to be adequate, but not as broad based throughout the system as might be desired. It is noteworthy that the previous year's evaluation found this to be the level most lacking in development of all project dimensions. It was found that significant growth has occured during the past year in career exploratory program offerings and activities. that teachers are by and large enthusiastic about this development, and that students appear to be willing participants. Much of this development growth is the result of a new CRUISE program which introduces students to cluster programs, and "Project GOAL" which provided real world work observation experiences for students during the summer months. It was also found that exploratory experiences are not as well developed for tenth grade students. Project staff indicate plans to strengthen this dimension through industrial arts, home economics, business education and science courses with an emphasis on interdisciplinary activities.

A promising note is the plan to continue a full-time exploratory coordinator and two half-time building coordinators, one at each of the middle school buildings. These leaders should provide the extra impetus needed to continue to fill existing gaps in the exploration phase. It is predictable that this program component will reach nearly full development within another two years.

III - Component 20 - Guidance

Guidance and counseling were generally found to be one of the two top strength areas of the project. Secondary counselors in particular have a depth knowledge of career program offerings, ranges of occupations available to students and job trends in each area. They were found to be a responsive and informed group, with an apparent strong commitment to career development counseling concepts.

Guidance functions at earlier levels are less clear, but there is evidence to suggest that limited student assistance is provided by counselors in the choice-making and information gathering processes. Students perceived receiving more help from

counselors than counselors indicated they were giving.

It is found that the project objectives for re-orienting guidance and counseling to a career development centered operation is being achieved. Guidance and counseling is seen far less as an isolate and more as a trend, when findings for this evaluation are compared with those of last year.

IV - Component 30 - Curriculum

Findings of this evaluation indicate that more teachers are beginning to integrate career education concepts into present instructional areas than was found a year ago. This is particularly true at the senior building level, where one-half of the non-cluster teachers interviewed produced evidence that they have specific lesson plan portions aimed at relationships to career development. Cluster teachers, too, are more conscious of the need for relating cluster programs to non-cluster instructional areas. Some have held meetings with non-cluster teacher colleagues, and have laid out definite plans for interdisciplinary and cross-department activities.

The integration of career development concepts is most in evidence at the elementary level. Every teacher interviewed was able to identify strategies and methods he or she was using to capture the career theme in early childhood learning programs.

Possibly the least curriculum effect is found at the junior building and middle school levels, although there is a noticeable increase in the amount and variety of activities over the past year. Teachers at this level generally appear to be aware of the need for career development relationships and exploratory activities. The extent to which implementation has occured, however, is not as great as at other levels.

In total, it was found that there is a definite trend throughout the system to modify existing curriculum to include the career development process. Teachers seem to be attuned to the idea that career education is not "teach different things", but is rather "teach differently".

V - Component 40 - Vocational Clusters

This is one of the two major strength areas of the project. The district has moved in three years from no cluster program offerings enrolling no students, to the present 12 cluster programs which enroll over 45% of the eleventh and twelfth grade students. Although some cluster program enrollments are low, there appears to be a trend of more students taking the occupational option each year. In general, cluster programs are well equipped, staffed with certified and capable instructors, and operate within state approved guidelines for cluster programs. The electronics cluster is constrained by lack of fully adequate facilities. The state guide is not used in the latter area; however, the instructor does utilize a comprehensive guide of his own design.

All programs have advisory committees, but all committees are not active, and one has not met at least once this year. Cluster instructors generally indicated a need for more time and information on how to utilize advisory committees effectively.

It was found that no vocational youth organizations exist in the program. According to the project director, student disinterest in such clubs and organizations is widespread throughout the school. Although vocational youth organizations are recommended in cluster guides, there is not presently a plan to initiate such groups in the future.

Cluster instructors generally indicate willingness to work with teachers from other disciplines, but interdisciplinary activities initiated from the cluster program are not widespread. There appears to be, however, considerable interest on the part of these instructors in future endeavors in this direction.

VI - Component 50 - Work Experience

The work experience program has continued to grow and expand throughout the past year, as well as through the three years of the project. Work station sites have increased by nearly 300 percent. Almost 20 percent of cluster students are enrolled in work experience programs, with a total enrollment of all students of 293 eleventh and twelfth graders.

Work experience at the ninth and tenth grade levels has expanded over the past year, but is still somewhat limited in relation to the number of students who could potentially be usefully served through an expanded effort. In-depth exploratory experiences for large numbers of tenth graders is a general career education program goal which has not yet been met in this project. The "Project GOAL" effort, however, did make work-experience-type observation opportunities available to a large number of middle-school aged learners during the summer of 1972. This program is planned for repetition in the Fall quarter, 1973.

The work experience program will be continued with a full-time coordinator during the coming year. The total effort of this important program phase is considered by the evaluators to be another of the major strong points in this comprehensive program.

VII - Component 60 - Articulation

Articulation among and between grade levels appears to be improved in general over the past year. Middle-school to junior building articulation planning and implementation were found to be good, indicating considerable program level cross-grade planning, and positive communication between these levels by teachers, counselors and administrators.

Likewise, articulation between grades 10 and 11 appears to be adequate and much of this effort must be attributed to counselors who assist students in forecasting courses for the junior and senior years. Also, teachers appear to communicate on a departmental basis regarding courses at each level, which also enhances the articulation process.

Special effort has been made during the past year to provide for articulation between the upper-secondary program and area community colleges. Approximately one-fifth of one project staff member's time is devoted to meetings with community college personnel, and planning and organizing exchange meetings between occupational instructors at both levels. Visits for students to community college and private vocational school campuses is also coordinated by this staff member. Increased emphasis on this area is planned for the coming year, and is provided for in the new long-range plan for career education in the district.

Other Related Findings

Program continuation following termination of the project appears to be quite adequately provided for. Results of an interview with the district superintendent of schools revealed a strong commitment to career education from the highest administrative levels and by the local Board of Education. The Superintendent stated that he believed that the district's goals and objectives for Project VIGOR had been met in virtually every sense. He stated that "...this project did what it was supposed to do...get a career education program going in a multi-level school system. It is not just a vocational program. We wanted a comprehensive, integrated approach, and we got that. We wanted the idea of a K through 14 career development concept, and we got that."

Further evidence of district commitment and intention to continue the career education program is found in the district's 1973-74 budget, where over $93,000 is identified for career education at all levels. The fact that the local budget did not pass at first presentation to the voters this year "...is no reflection on career education...in fact, the budget committee was concerned about having enough for career education" according to the Superintendent. He indicated a generally strong feeling of patron support for the program, and a personal knowledge of considerable community involvement in all aspects of the program.

As to the future, the Superintendent stated that "...this is not a 'flash in the plan' effort.. it is to be a regular part of the whole curriculum, and should effect every class of every teacher."

With regard to replication and exportation of the products and processes developed in the Project VIGOR Exemplary model, the Superintendent noted that other districts today are dealing with an entirely different set of circumstances than did David Douglas Schools three years ago. There is more information available on career education, more visibility for the concept in theory and in practice, and a more positive attitude on the part of parents and other publics for the idea of career education. He indicated that the district is aware of its commitment as a model program site, and will support dissemination and replication efforts which will follow project termination.

Other findings already reported support the position and interpretation of the Superintendent of David Douglas schools conerning continuation of the program. Staff assignments appear to be fully adequate for continuation to be achieved, and local funds are provided for to, as the Superintendent put it "...pick up the costs now being born by the Project."

CONCLUSIONS

The following conclusions are limited to interpretation of findings for the annual evaluation in Section I. Conclusions relating to impact of the total three-year project are found in Section II. The data produced from objective measurements and interviews in the annual evaluation lead to the following conclusions:

1. Approximately four out of five third and sixth grade students are able to relate themselves to jobs.

2. In naming jobs, students at David Douglas in grade three show a wider range of ability to perform that task than in a similar non-career education centered school district.

3. Reliance for career information is basically on the classroom teacher in the early grades. By the eighth grade, reliance is substantially on counselors (only 36 percent of the teachers sampled could remember giving career assistance, while 58 percent of the students sampled recalled getting such help). In the later grades, there is much more integration of career information sources for students. The weakest group is academic teachers, where about one out of two can relate subject matter to clusters and vice-versa.

4. The present high school counseling staff demonstrates an outstanding knowledge of career information.

5. Other than conclusion (2) above, David Douglas students respond to career education product stimuli at the same level as a similar district that does not have a career education program, until the David Douglas students reach grade 11, where they evidence significantly better response.

6. Students in the eighth grade were not comfortable with the concept of clusters.

7. Since the end of the second project year, more teachers and counselors appear to understand the career education concept, due largely to efforts of VIGOR staff.

8. Plans to continue the career education thrust in the district appear to be well developed, and staffing will be at approximately the same level for program direction and coordination as during the project.

9. Exploratory programs appear to have increased at junior and middle schools in terms of quantity. There remain gaps in this program level, however, in the view of teachers and project administrators.

10. Administrative support for career education at the Building Prinicipal, Superintendent and local Board level appears to be strong, and has increased over the second year at the elementary and middle and junior high levels.

No recommendations are made based on findings and conclusions in Section I. Recommendations on the total project are found in Section II, and reflect the gross input of both the annual and three-year evaluations.

SUMMARY

There is considerable evidence to indicate that major strides have been made in the development and implementation of this project during its third and final year of operation. Awareness programs appear to be reaching more students than in previous years. Very definite advancements have been made in strengthening the exploratory level of the project. There remain, however, some gaps in the exploratory program which need to be filled. Curriculum change, although typically slow, appears to be occuring in the direction of integration of career education concepts into many subject areas. This effort is far from complete, however, and will probably require several more years to become a reality. Counselor resources, especially at the secondary level, are excellent in terms of career education knowledge and in working with learners. If a trend is being established here, it is to be hoped that it will soon extend to counselors at earlier levels who are not yet seen by students as a ready resource of career information. Cluster programs have continued to develop and expand at the senior building. As other levels continue to develop, it is expected that enrollments in these programs will increase. Project continuation appears to be associated with the assignment of staff and dollar resources for program extension for the coming year.

Section II

Final Three-Year Report

Project VIGOR Evaluation

1970-73

"THE BUSINESS OF PROJECT VIGOR IS TO CHANGE A CONVENTIONAL ACADEMICALLY-ORIENTED GENERAL EDUCATION SCHOOL SYSTEM INTO ONE WHOSE CURRICULUM REFLECTS THE NEEDS OF ALL STUDENTS REGARDLESS OF THE LEVEL OF ENTRY INTO THEIR CHOSEN VOCATION."*

(* From Project VIGOR Goals and Objectives as found in the proposal and interim reports.)

INTRODUCTION

It is known from the results of Section I and past evaluation efforts, that there were no students enrolled in career education cluster classes at David Douglas prior to the establishment of Project VIGOR--there were in fact, no career cluster classes at that time. It is also known that there were 142 students enrolled in four career cluster classes during the first year of the project, 543 students enrolled in eight such classes the second year and 821 students enrolled in twelve career cluster classes and other vocationally approved courses in the third year of the project.

In addition, there are figures which will attest to the fact that the middle school programs in self awareness and occupational exploration have involved 1513 students and, that all of the 3945 elementary students have had some exposure to career awareness. In a purely quantitative sense, Project VIGOR has demonstrated extensive contact with students at all levels of career education and also established at least twelve career cluster classes.

Additional quantitative evidence of accomplishment for Project VIGOR includes the creation of seventeen advisory committees (involving 98 lay community members, 28 certificated staff members and 16 students) with each committee meeting on the average of five times per year. Also, Project VIGOR conducted 27 inservice workshops for 2473 staff people. An impressive set of figures for three years of operation.

However, Section I has addressed these accomplishements fully, including analysis of data and an official recording of its findings and conclusions. To expend time and energy in Section II in further elaboration on the statistical progress of Project VIGOR over the three years of its operation would be to duplicate the efforts of Section I. Accordingly, the three year evaluative report (Section II) will concern itself with the question of change. Did Project VIGOR effect change: Change in the thinking and actions of staff and students; Ch es in curriculum; and, Change in the operation of schools.

In short, did Project VIGOR achieve its goal to:

"...change a conventional academically oriented general educational school system into one whose curriculum reflects the needs of all students regardless of the level of entry into their chosen vocation." ?

In discussing the question of goal achievement (change), the evaluator will present his findings within the framework of Project VIGOR's two part thrust; the first and most visible of which is the institution of a career cluster program at the secondary level and, second, the less visible development at the career awareness and exploratory levels. In this regard, the three year evaluation will attempt to demonstrate that, while successful in making career education visible throughout the District, Project VIGOR failed to deal with the basic steps of organization and management, which lessened its impact at all levels.

The general lack of early, in-depth, planning reduced the effectiveness of Project personnel, dissipated career education resources across a broadly diversified front, created frustration and resentments among many District staff toward the Project

and career education, placed an undue emphasis on the more visible aspect of the Project (career cluster levels) to the detriment of the less visible aspects of the Project (career awareness and exploratory levels) and, slowed progress in career education in the District, for the first two years of the Project.

The plight of Project VIGOR, in its effort to effect change, is not atypical. Many projects suffer from problems similar to those described above, which suggests the need for state-wide attention to pre-project planning. The "soft-money" approach of the Federal government, funneled direct to local districts or through state agencies, is too often producing "soft products". Like the money, the products produced are often concstructed on a soft foundation and sink into oblivion when the support of Federal dollars is withdrawn.

The theory behind soft money is sound, and with Project VIGOR the loss of what has been produced with such dollars has been forestalled through planned District support for next year of an amount nearly equivalent to the level of Federal funding in earlier years. However, a firm foundation has yet to be constructed and it is incumbent upon the District and the State to see that it happens. The foundation requires precise identification of products for learners to seek, rather than only processes (activities). It is the judgment of this evaluation that the practice of career education state-wide needs further examination and clarification of its products before it can become something more than a series of activities which produce little or no measureable change.

When career education as a state-wide concept fails to produce in practice (through projects like Project VIGOR), what it envisions in theory, it is difficult to fault the project. Under these circumstances, the accomplishments of Project VIGOR toward change may have come about in spite of career education rather than because of it.

Project VIGOR Goals and Objectives

Project VIGOR's written goals and objectives were unchanged during the three years of the Projects operation, according to annual project reports. (by definition of Project personnel, the interim reports dated July 15, 1971, June 15, 1972 and April 2, 1973 were the annual reports for Project VIGOR.)

Goals for Career Awareness and Exploratory programs included:

PRIMARY- Every child will see the world of work as a part of his developing self and will learn some career classifications (jobs) by name.

INTERMEDIATE - Every child will be able to identify the relationship between his school courses and the world of work and will learn to group employment classification into job families. Every child will see the world of work as a significant part of his developing self and will learn the names of many jobs.

MIDDLE - Every student will be able to relate a knowledge of his own characteristics to known occupational requirements and will be able to locate detailed information about specific job requirements.

Goals for Career Cluster programs included:

JUNIOR - Every student will explore chosen occupations and select courses supportive to his broad career field choice. Each student will demonstrate a knowledge of the relationship between his developing education and his emerging vocational being.

SENIOR - Every student will elect a combination of courses specifically designed to meet needs of students having chosen his career area. Every cluster student seeking entry level skills will develop those qualities necessary to obtain employment in his chosen occupational area.

Goals for Articulation and Post-high School included:

POST HIGH SCHOOL - The school will provide follow-up contact service for former David Douglas students and placement assistance, where possible, for youth of this community. Compatibility of programs for students advancing from David Douglas to an institution of higher education will be maintained.

It is difficult to conceive of the situation where project goals and objectives for any three year project would remain unchanged. Unchanged goals and objectives indicate that the goals and objectives were either (1) ignored by Project personnel in administering the Project, and in this event were only written to satisy requirements for the grant; or, (2) vague enough to allow interpretation at will and therefore required no change--only new interpretation; or, (3) a true reflection of Project direction, which remained unchanged for three years. It is suspected that with

Project VIGOR, the goals and objectives were reinterpreted at will among Project and District staff. According to the Project VIGOR director, each level of instruction had responsibility for interpreting the goals and objectives for that area and for building a program for their achievement. The loosely written goals and objectives, easily interpreted to serve the readers, were then reshaped by building administrators at each of the career cluster and awareness and exploratory levels to serve their particular concept of what ought to be achieved.

This approach helped create and perpetuate the imbalance between Project efforts at the career cluster and the career awareness and exploratory level. By failing to deal with the Project's direction, as prescribed in its goals and objectives, a wrong direction was not corrected. It was only when the frustration level of both Project and district personnel peaked, that the imbalance was discovered (toward the end of the second year). When exposed fully, the imbalance was corrected. To their credit, Project VIGOR staff appointed coordinators for and made outright grants to schools at the awareness and exploratory level and the results were significant.

With a regular assessment and rewriting of goals, new directions are established. A change in goals and objectives is a healthy step, reflecting attention to experience and variables which may take a Project off course or establish for it, a new course.

Too often Project personnel feel locked - in to goals and objectives as originally stated. Again, it is difficult to fault Project personnel if funding agencies have not made it clear that goals and objectives ought to be rewritten to reflect new and better direction. (Changes in goals and objectives were suggested in evaluations of the Project, but for reasons unknown to this evaluator, not reflected in later statements of Project goals and objectives).

All this is not to say that the Project personnel did not change direction when they felt a change was required, for they did. However, by failing to change the goals and objectives to reflect new direction, there was little if any documentation of changes and no evidence as to why the change in direction took place. The lack of documentation seriously hampers transportability of the Project. By not documenting change, replication of the Project may carry with it all the ingredients for making the same errors over again.

One final point about the Project's goals and objectives: Nowhere did the annual reports suggest a priority for the Project's goals and objectives. It was clear that the career cluster program had a high priority among Project personnel, as Project resources found their way to this level, but this priority was not reflected anywhere in Project materials. There is evidence to suggest that stating such a priority would have evoked criticism from funding agencies and, of course, from levels not benefiting from such a priority.

It is evident that priorities changed, as the career awareness and exploratory levels received more attention toward the end of the Project than at the beginning.

Failure to conciously set priorities always leads one to think that either (1) there are no priorities, and as such all should be, but rarely are, treated equally; or, (2) priorities are hidden, which always results in wasted expenditures of resources to

keep them hidden; or, (3) priorities are allowed to set themselves, which means that the squeaky wheel will get the grease".

The analysis of annual reports leads the evaluator to conclude that they served well as a description of the activities going on within the Project, but served the Project only marginally as a management and operation tool.

Evaluation Reports

The Project was required to contract for a third party evaluation each of the three years of the project. This obligation was fulfilled by retaining the Teaching Research Division, Oregon State System of Higher Education, for the first year evaluation and the Oregon Department of Education, Research Coordinating Unit, for the last two years.

For the purpose of this three-year evaluation, it is fair to say, regarding the first year evaluation, that no one was really prepared to conduct an evaluation like that suggested and expected by the Federal government.

First, the report is subjective in nature exhibiting no hard data to support or deny contentions of progress. A partial answer is in the absence of an initial Project evaluation plan which would identify expected outcomes and measurements of performance. The Project cannot be faulted for not insuring the existence of a plan, for this criticism more rightly belongs with the funding agency. To insure the collection of Project related data, the Project must have an evaluation plan. (see Project Limitations--Appendix C).

Second, the first-year evaluation was apparently conducted without the aid of on-site visitations and only limited contact with Project personnel. Under these circumstances there was little opportunity for formative evaluation, which will always aid a Project during its early years of operation.

Third, the first-year evaluation report produced little in the way of constructive criticism which would assist the Project with direction. The report contained a good deal of praise and recognition for accomplishments, which is appropriate, but the almost complete absence of challenging statements, suggests that the report may have been more accurately defined as a synthesis of Project staff opinion.

Unfortunately, there was no apparent recognition of the problem which contributed to a less than useful evaluation for the first year (the fact that the project was operating without a properly constructed evaluation plan), as the second year evaluation, under the direction of the Oregon Department of Education, also operated without a formal evaluation plan.

Unlike the first evaluation report, the second report offered constructive criticism by raising questions pertinent to the identification of problems and offering recommendations for their resolution. Recommendations, here paraphrased, included:

1. Placing the term "Project VIGOR" in a lower profile to the language of career education to improve communication. Project personnel responded, but maintained that this resulted in no change in the ability of staff to communicate "the comprehensive role of career education", as those threatened by use of the term "Project VIGOR" would also be threatened by "career education" terms.

2. Greater use of outside agencies. Project personnel maintain that that numerous requests for assistance were made, but with only limited response. One promise of an outside agency was to have a specialist on campus once each week--which never materialized. It appears that Project personnel and "outside agency" personnel left it up to the other to make contact. Both were apparently too isolated, and operating too independently.

3. Continuous evaluation built around a formative model should take place. This practice, good in theory, failed to materialize. To make it work would have required the aggressive efforts of the third party evaluator, which did not occur.

4. Improve articulation between grades through multi-grade level staff meetings. The Project staff, although in regular contact with individuals at all grade levels, failed to systemically organize to achieve this goal.

5. Dispel fears that career education will displace "solid" subject areas, through small "curriculum integrating" work groups. Since this fear is still prevalent among many instructional personnel, it is evident that the goal fell short of achievement. Since the small committees were not formed to meet on a regular basis, it is also assumed that the suggestion was not followed.

6. Increase use of counselors - particulary at the junior and senior buildirg level. The results of the on-site evaluation, conducted recently and reflected in Section I of this report, indicate a rousing success in this area. Counselors at the junior and senior levels demonstrated extensive knowledge of career education and students at these levels confirmed the value of career education counseling.

7. Emphasize "depth exploratory experiences in work experience settings for tenth graders". It is doubtful that "depth" experiences were achieved, as the evidence pointed to a heavy concentration of work experiences in the form of "field trips" and "speakers" and very little beyond these traditional activities.

The above were selected from the recommendations in the second annual evaluation report, to discuss specific points which deserved special attention. Other recommendations in the second year evaluation report included:

1. Dissemination of career education accomplishments - - no significant change from previous years is found.

2. More in-service training -training was conducted, but there is no documented evidence of accomplishment beyond the fact that certain classes and sessions were held.

3. Use of students for orientation of other students to career education. Some evidence of this exists for grades 11-12 only--student conducted committee which produced literature and held career education sessions. There is no evidence that this program reached into the career awareness and exploratory levels, which was intended in use of term "lower grades".

4. Contact and utilize IPAR. Limited contact, partially due to the newness of IPAR and its inability to respond effectively to project requests.

5. More community related contacts. Generally left to the iniative of local schools.

6. Increased emphasis on avocational role. Although most Project and District personnel discussed the importance of the life roles, there was little evidence of emphasis on anything but job related skill or occupational role. The report makes reference to, and encourages, Project planning efforts to fill gaps in efforts at goal achievement. To be effective, this recommendation should have included a training session for Project staff on proper planning technique.

Without the aid of an evaluation plan, evaluators are often forced to make interpretations about desired levels of achievement--not an appropriate function for evaluators. However, agreement as to the appropriateness of the interpretations was sought and secured from project personnel. This did much to add to the reliability of data and results reported in the second evaluation report and Section I of this report.

Unlike Section I, Section II of this evaluation report relys solely on the persuasiveness and logic of subjective evidence presented in support of findings.

One final not on this final evaluation. No attempt was made to conduct a cost analysis of Project VIGOR. The decision to forego such a study was a concious one on the part of the third party evaluators. It reflects the belief that cost data to be comparable and produce evidence on which others can rely, must be collected each year or the data will lose their validity. As a tool for decision making, especially as it relates to transportability of the project, cost data are important, but must be part of a long range data collection process and an integral part of a Project's evaluation plan.

FINDINGS

The following are the general findings of the evaluation. These findings are based on the systematic and organized reduction of subjective information, primarily open-ended responses to questions in several categories by various personnel in the Project.

The findings are presented in narrative form and according to each of the major components of Project VIGOR.

I - Component 00 - Awareness

Awareness suffered from inattention during the first year of the Project and consequently little change was produced as a direct result of Project VIGOR intervention.

It wasn't until the second year when, in an effort to initiate movement, Project VIGOR established three incentives for building administrators at this level. First, Project VIGOR encouraged and supported visitations by administrators to career education programs in other parts of the state and country. The purpose of these visits was to create interest and provide information to the end that building administrators would return to their school and initiate a career awareness program. Second,

special grants were awarded those schools submitting a proposal for funding a career awareness program. Third, advisory committees were established.

In the third year, partially because of the results of special grant awards, Project VIGOR made grants of $700 to each elementary school for career awareness. The approach was positive and produced the desired results, but was criticized by local school administrators because the money was categorized as follows:

$500 - equipment
$200 - supplies

Administrators would have preferred no categories.

II - Component 10 - Exploration

Career exploratory programs are becoming fairly well established during the third year after early difficulties to generate staff interst.

The appointment of two coordinators at this level improved measurably the enthusiasm for career education. Local control and joint decision making at the district level has also contributed positively.

Of note is the fact that career exploratory students in the control school scored as well as students in the area served by Project VIGOR. However, it should also be noted that Project VIGOR had successfully brought career education to the exploratory level and that accordingly, the Project should not be faulted for the fact that no difference was reported between control and Project districts.

III - Component 20-Guidance

Guidance is still not considered a strong support service or system for teachers and learners at grades 1-6 level.

At the grade 7-8 level (mid-schools) the guidance programs seems to be more complete and supportive of career education with the single exception of planning the immediate next step after graduation. This might be because both mid-school counselors and teachers are leaving these kind of decision making steps to the junior and senior building counselors.

At grades 9-10, the counseling impact has increased significantly according to the data. Counselors indicate that the service is available, but is used on an informal basis. Students indicate more use of counselors than the counselors indicate they are providing help.

At grades 11-12 (the senior high school building) respondents are very guidance conscious and most of the program is operative.

Like most guidance departments, this one still requires more resources. Some specifics, such as test materials, career centered supplies, and career inventory evaluation methods should be supplied for these career education programs, especially at the earlier grade levels.

In general, it appears that from the standpoint of the guidance role in the career education program development area, career education is seen less as an isolate

and more as a trend over last year. There is probably no better vehicle existing within the present school system than the guidance and counseling support service effort to accomplish the goal of infusing the career education theme across many learning areas.

IV - Component 30 - Curriculum

Findings of third-year (Section I) evaluation indicate that more teachers are beginning to integrate career education concepts into present instructional areas than was found a year ago. This is particularly true at the senior building level.

The integration of career development concepts was found most in evidence at the elementary level. Every teacher interviewed was able to identify strategies and methods he or she was using to capture the career theme in early childhood learning programs.

There is a noticeable increase in the amount and variety of activities over the past year at the mid-school and junior building levels. Teachers at this level generally appear to be aware of the need for career development relationships and exploratory activities. The extent to which implementation has occured, however, is not as great as at other levels.

There appears to be a definite trend throughout the system to modify existing curriculum to include the career development process. Teachers seem to be attuned to the idea that career education is not "teach different things", but is rather "teach differently".

It appears that the career education theme is having only a minor influence on the general curriculum and that in some levels, particulary grades 9-10, there will need to be more staff development, staff awareness through in-service, and orienation to a central concept before the general curriculum and basic subjects will be affected by the career development theme.

V-Component 40-Vocational Clusters

The occupational cluster program at the senior building, grades 11-12 has been planned, staffed and implemented with provision of special facilities, input from additional staff and support by the Project VIGOR effort.

Subject matter (non-cluster) instructors were less enthusiastic about the cluster program development and contributed limited information and remarks through interviews. Other teachers gave meager or no answers suggesting lack of articulation with other than cluster classes and that generally their students were not in cluster classes or they were not too concerned about relating these two types of classes. Cluster teachers seemed to be enthusiastic about this particular area, which can be attributed, in part, to their particular role in it.

This appears to be a mjaor strength of the program; evidence the high interest level and number of participants which view their cluster training as relevant. (See Section I - page 37.)

VI - Component 50 - Work Experience

It appears that while the cooperative work experience dimension of the program has been one of the bright spots and is an ongoing and successful activity, it can use strengthening at the 11-12 grade level to include even more students and some modification and expansion in order to provide the kinds of in-depth career exploratory activities that are needed by learners in grades 9 and 10. (See Section I, page 38 for additional information and summary of findings).

VII - Component 60 - Articulation

(See Section I, page 38. The same general findings related in Section I apply for the three-year evaluation report in this instance).

Summary of Findings

From the activities conducted under Project VIGOR, we know that:

1. The District has a positive feeling about career education. This belief is measured against an early resistance on the part of many to keep vocational education out of the David Douglas School District.

2. Students are now learning skills for jobs traditionally reserved for "the other sex", or for "other peoples' kids".

3. Adults can now enter the buildings without immediately becoming suspect. The sight of a parent or other adult in the building in the past meant that a crisis existed. Now it goes almost unnoticed.

4. Credit toward graduation is now being given for activities which take place off campus, brought about by an agreement between the District and the community.

5. Many classes are now conducted exclusively off campus, using the resources of the community.

6. High school level training is now relevant for a majority of students. (See Section I).

7. Teachers are becoming more involved in and committed to career education.

8. Noticeable advancements have been made in development of career awareness and exploratory programs.

CONCLUSIONS

Several important conslusions can be drawn from the findings and from information synthesized and reported heretofore and in Section I.

1. Many of the resources of Project VIGOR were dissipated across a broadly diversified front. The District, through Project VIGOR, failed to produce a visible operational plan which would maximize the limited resources available to it. It depended largely

on the initiative and skills of its staff to make the best possible use of resources. This it did, but to maximize resources would have required a detailing of direction and outcome. The Project operated for three years under a design which can best be described a "reaction to action"; e.g.; the schools act and the Project reacts and vice versa. Project staff were forced to operate under this type of structure for a variety of reasons. There existed nowhere in the district a plan which identified specific products to be achieved. The project proposal was of course, the plan, but its failing was in its lack of provision for the limited capacity or inability of staff personnel to organize and direct its resources in the most efficient manner possible. As is so often the case with projects of this nature, no administrative staff training or inservice was provided for.

The goals and objectives were apparently conciously set down in loosely worded phrases for the express purpose of allowing local school personnel to interpret each in its own way and then prescribe programs according to that interpretation.

It is important at this juncture to note the progress that took place later in the Project as staff learned, the hard way, the techniques of management and organization. Each year demonstrated new achievements due to better organization. The goals and objectives stated following represent the most precise statement of what was to happen and yet they deal primarily with activities, leaving unanswered the question: -To what end? To what end was Project VIGOR to develop a comprehensive career education program for students in grades 1 through 14, and what constitutes a "comprehensive" program?

Specifically, the questions can be enumerated against the listed goals and objectives, thus: To what end will students?:

1. Demonstrate characteristics of a viable work attitude.

2. Identify themselves and their personal characteristics in relationship to their future as wage earners.

3. Use resources of vocational information constantly in the process of vocational goal setting.

4. Recognize the relevancy of general curriculum experiences (English, math, science, social studies) to future employment.

5. Demonstrate skills and knowledges accrued from courses which relate to vocational education at later grades.

6. Demonstrate skills and knowledges demanded for entry employment in jobs which have common characteristics and which belong to a family of vocations. (Vocational clusters)

7. Transfer general curriculum tool skills (reading, writing, computation, scientific concepts, etc.) because of a recognition of their relevancy to vocational experiences.

8. Elect further vocational training after high school.

9. Perform satisfactorily in the community, under school supervision, work experience assignments related to classroom instruction.

10. Complete at least four years of high school by not dropping out.

To what end will the project?:

1. Provide awareness and exploratory opportunities, and demonstrate school's relativity to life programs for students in grades 1 through 6.

2. Provide a specific class experience, grades 7 through 9, enrolling all students which will clarify the role of the worker, employer, government and community in the world of work and which will present sources of vocational information.

3. Provide an integrated career guidance program, grades 1 through 14.

4. Provide specific courses in the general curriculum which emphasize their relevancy to future vocations and job needs by identifying activities and materials which emanate from student vocational goals and objectives.

5. Organize patterns of related courses which if elected by students will provide basic understanding and skills necessary for more specific vocational training.

6. Develop program, staff, training models, facilities for vocational cluster experiences by the end of three years for approximately 800 eleventh and twelfth graders each year.

7. Articulate all program components through the community college level.

8. Provide meaningful on-the-job work experiences which relate to vocational interests and training for approximately 800 high school students.

9. Create, design, and implement a follow-up study of high school graduates for continued program improvement and expansion as well as evaluative data.

Are these activities important and do they relate in their effort to achieve a common outcome? For example, is the end (1) job placement; (2) maintenance of family units; or (3) individuals who can think and make a decision? Or, is the end something else entirely? While answers to these questions were difficult to find, there was positive direction provided by these statements.

The question as to what end was the direction provided, was apparently left unanswered. It is unclear whether the decision to leave it unanswered was a conscious or an unconscious one. Regardless, the fact that the question was not answered in a statement of desired ends (products), (that is, a plan) resulted in a dissipation of resources.

2. Project VIGOR had a disproportionate emphasis on career cluster programs which resulted in a suppression of career awareness and exploratory programs. There is substantial evidence to support this finding.

First, the project proposal was prepared by individuals from the secondary level only. Their orientation was program development at the high school level and the degree of specificity which described activities at that level was in marked contrast to the degree of specificity at the career awareness and exploratory levels.

Second, the dollars available for career awareness and exploratory levels were non-existent during the first year of the program, then were awarded on the basis of special grants the second year and by categorical grants the third year. In no case did the total amount of dollars going to awareness and exploratory programs exceed a token amount.

Third, Project VIGOR efforts to direct career education at the awareness and exploratory level during the first two years were secondary to efforts at the career cluster level, often meeting with failure because of inexperience with operations at that level. It was only after the appointment of building coordinators at these levels that evidence of career education activities began to surface. To the credit of Project VIGOR staff, the effort to establish a connection at the awareness and exploratory level, was increasing.

Finally, the per pupil expenditure at the awareness and exploratory level was dwarfed by per pupil expenditures at the cluster level. The apparent over-emphasis on career cluster program development produced questions and concerns which often led to resentments among administrators at the earlier levels, which resulted in a slowly developed awareness and exploratory programs.

3. Career Education at the awareness and exploratory level is not new. Career education as presented to staff at the awareness and exploratory levels was process oriented and not substantially a new intervention. However, Project VIGOR was operative, for the most part, under state concepts of career education, which are yet to be tested as valid. The Project was also operating without the aid of guidelines or resource specialists. The goals of the Project provide evidence of the fact that career education was being presented as a series of activities without an identified end product. (See earlier statements of goals and objectives).

   Teacher reaction originally was one of suspicion and uncertainty, primarily because many saw it as an addition to already heavy teaching loads. However, as teachers began to experience career education, the response was that "career education is not new, we have been doing it for years". They held this opinion because career education often manifested itself in the form of field trips and like activities. The only thing that had changed was the name. The process had not, although one administrator described this difference; "we used to go on field trips to the cookie factory to see how cookies were made, and at the end of the day we got the cookie. Now we go to the cookie factory and look at the people who make the cookie and we still get the cookie at the end of the day."

   On the surface, the career education concept presents a "business as usual" theme. However, through the persistence of Project VIGOR staff, building staff began to explore more fully the possibilities presented through this Project. Suspicion turned to interest and interest to career related activities.

4. Project VIGOR staff was inexperienced in techniques of management organization and data collection. Like many Projects throughout the United States, it was difficult to organize and operate at the same time. It appeared that because of the relatively

slow beginning and the accelerated pace which characterized the final year of the project, Project personnel were forced to develop needed skills as they progressed. This they did successfully. Much of what was accomplished, administratively, had to be by trial and error.

Had project staff been trained in techniques of district wide organization, data collection and administration, the accomplishments of Project VIGOR could have probably have been accelerated. For example, second year efforts with career awareness and exploratory programs were not a desire to suppress efforts, but rather reflected not knowing how to go about integrating those areas with Project VIGOR.

However, in spite of problems related to management and organization, Project VIGOR accomplishments were major.

5. Project VIGOR transportability is weakened for want of documentation. There are essentially two steps in the area of documentation that would assist in the replication of the Project. First, is the failure of schools to maintain logs (some maintained 35 mm slide records, but this is less than satisfactory for transportability). Second, staff were not trained in data collection procedures, so that data collection could take place at each level.

Project VIGOR events and activities were reasonably well accounted for in reports.

6. Project VIGOR was process rather than product oriented. Project VIGOR has conducted, and been responsible for the conduct of, career education activities and yet no where was it made evident to what end the activities were to be conducted.

It is difficult to fault Project VIGOR for encouraging staff and students to become involved in these activities for they represent, in a composite, the State career education concept.

At the career awareness level students are to become aware of jobs; at the career exploratory level they are to learn about jobs; and, at the career cluster level, they are to learn job skills after selecting a cluster class of interest. Is the end product to secure the job and apply the skills learned? Or, is it broader, encompassing the life roles, and allowing the student to assume his role in society? Or, is the end product to train individuals to make decisions about themselves? Or, is it a combination of all these? Just what is it that a student will be able to do after being exposed to career education that he could not do before? And, is what he can do, as a result of career education, important?

The single most important conclusion reached in the evaluation is that the activities in which students were engaged were leading toward something, but it was never made clear what it was that was being sought. The implication is that career education is a means to some end. It is obviously not a panacea for providing students with what they need to make decisions about jobs, as there yet is no evidence that students are making better choices about jobs than students who haven't experienced career education.

It would appear that career education needs further examination and clarification at the state level before it can be "integrated" into the traditional classroom setting. When integrated, it appears to lose visibility. Career education advocates contend

that career education ought to be integrated and yet remain visible. Classroom teachers suggest integration results in a loss of visibility because it is, in fact, "nothing new". It only represents the renaming of traditional classroom activities.

When analyzed, field trips, resource speakers and other special learning events, which are a part of career education today, all have a historical base.

What then is new about career education--it has more of an interest in the individual perhaps. This is manifested in primarily two ways: First, an emphasis on the cookie machine operator, rather than the cookie machine. And, second, an emphasis on self.

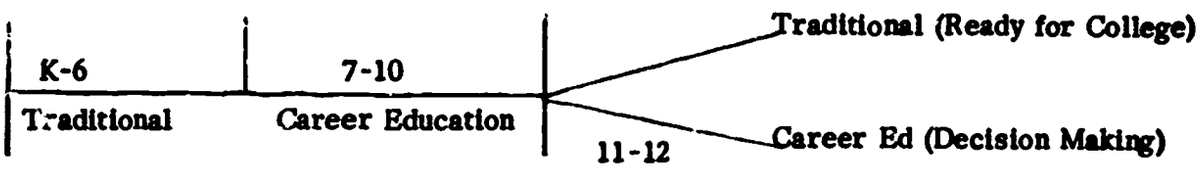
To emphasize the operator over the machine, students are taught to look for people on field trips and return to describe in writing, and discuss, what they saw. This is then related to books read, speakers heard and other activities conducted. The process is akin to any other data or information collection process. However, before data take on meaning, they must be analyzed, synthesized and utilized in decision making.

To emphasize self, career education includes self analysis activities like the General Aptitude Test Battery (GATB), U. S. Interest checklist (ICL) and other personal assessment instruments. Again, the process is one of data collection which must be carried through the stages of analysis, synthesis and utilization in decision making.

It appears that there is substantial evidence to indicate that teachers can take learners through the activities which produce the data, but rarely does analysis, synthesis and decision making take place. Evaluations have been conducted, to demonstrate the students ability to name jobs, places visited and tests taken, but rarely, have we tested the students ability to make decisions about himself. Career education appears to go right up to decision making and then stops short of that product--the ability to make choices or decisions.

Project VIGOR has successfully presented career education to the district as conceived by the State. However, from evidence presented in Section I, career education at the awareness and exploratory level is "business as usual". This was brought out by the fact that there was no significant difference between Project VIGOR students and control students in career education related abilities. However, at the career cluster level the difference was significant. Eighty-four percent of Project VIGOR students who graduated from cluster classes felt their high school training was relevant; whereas, only 46 percent of control school graduates felt their high school training was significant. And, as a check on these results, only 54% of Project VIGOR students in non-cluster courses felt their high school training was relevant.

The results graphically presented look something like this:



There is a definite change at the career cluster level. Perhaps the difference between now and pre-Project VIGOR is the fact that career cluster enrolled students were forced (or allowed) to make a decision. Whether they have the decision making capabilities is not known; and, if they did, whether they would make the same choice again is unknown.

7. Career cluster programs add relevancy to high school training for many students. A greater effort should be made to assist students learning the processes of choice making and decision making, including data collection, analysis and synthesis of data for decision making.

RECOMMENDATIONS

It is evident that Project VIGOR has produced significant results. The continuation of career education through a District allocation of $93,000 for next year attests to this fact. It is in recognition of this support and the prospect of continued change that the following recommendations are made:

1. The District should maximize the use of its resources for career education through the development of an operational plan which identifies in precise measurable terms the change (products) being sought through career education, grades K-12.

2. The District should insure documentation of progress through the production of hard data on which all can rely. This can best be achieved through the development of an evaluation plan prior to the beginning of the continuation effort.

3. The District should establish priority goals and objectives which reflect support for the career awareness and exploratory levels.

4. The District should encourage the State Department of Education to examine and clarify the career education concept in terms of outcomes, and provide guidelines and training relative to newly defined concepts.

5. Program staff should receive training in the techniques of management and organization, data collection, analysis and synthesis.

6. Program staff should establish a decision making body on career education which involves representatives from all levels.

7. A greater effort should be made to assist students in learning the processes of choice making and decision making, including data collection, analysis and synthesis of data for decision making.

SUMMARY

There is substantial evidence indicating progress in career education at all levels in the David Douglas schools. Progress at the career awareness and exploratory levels is less significant than that at the career cluster level. Further advancements at the awareness and exploratory levels will require substantial in-puts of manpower and dollars from both the State and the District with control maintained at the local level.

Much is yet to be done, but with the support of the district and the experience of the staff, the prognosis for the full development of a comprehensive career education program and system in the District is good. Most, if not all, of this accomplishment must be attributed to the intervention of the Exemplary Project VIGOR.

APPENDIX A

TABLES OF RESULTS

TABLE I

OBJECTIVE I

Eval. Plan Ref.	No. of Students or Staff		Percent Passed		Statistical Test Type/Result	
	David Douglas	Control	David Douglas	Control		
I-A-1	100	90	85.0	88.9	z	-0.79
I-A-2	100	90	59.0	50.0	z	1.24
I-B-1	100	99	75.0	73.7	z	0.16
I-B-2	100	99	66.0	69.7	z	-0.60

TABLES OF RESULTS

TABLE II

OBJECTIVE II

Eval. Plan Ref.	No. of Students or Staff		Percent Passed		Statistical Test Type/Result	
	David Douglas	Control	David Douglas	Control		
II-A-1	100	90	Scores $\bar{x} = 4.21$ $\sigma = 3.27$	Scores $\bar{x} = 3.62$ $\sigma = 2.45$	t f	1.40 1.79**
II-A-2	100	90	78.0	80.2	z	-0.73
II-B-1	100	98	17.0	22.5	z	-0.96
II-B-2	100	98	93.0	91.8	z	0.31
	**significant at 1% level.					

TABLES OF RESULTS

TABLE III

OBJECTIVE III

Eval. Plan Ref.	No. of Students or Staff		Percent Passed		Statistical Test Type/Result	
	David Douglas	Control	David Douglas	Control		
III-B-1(i)(ii)	100	98	1.0	5.1	z	-1.68**
III-A-1	10		100.0		Expected %	100.0
III-A-2	30		100.0		Expected %	100.0
III-A-3	10		100.0		Expected %	100.0
III-C-1	53		84.9		Expected %	80.0
	**significant at 5% level.					

TABLES OF RESULTS

TABLE IV

OBJECTIVE IV

Eval. Plan Ref.	No. of Students or Staff		Percent Passed		Statistical Test Type/Result	
	David Douglas	Control	David Douglas	Control		
IV-A-1	97	96	85.6	79.2	z	1.06
IV-B-1	97	96	76.3	90.6	z	2.44**
IV-C-1	97		19.6		Expected % 80.0	
IV-D-1	97		32.0		Expected % 40.0	
	**significant at 1% level					

TABLES OF RESULTS

TABLE V

OBJECTIVE V

Eval. Plan Ref.	No. of Students or Staff		Percent Passed		Statistical Test Type/Result
	David Douglas	Control	David Douglas	Control	
V-A-1	10		50.0		Expected % 100.0
V-A-2	14	60	35.7	58.3	Expected % 80.0
V-B-1	10		80.0		Expected % 100.0
V-B-2	97		No. passed: 29		Expected no. 25

TABLE OF RESULTS

TABLE VI

OBJECTIVE VII

Eval. Plan Ref.	David Douglas		David Douglas		Statistical Test Type/Result	
	Total Enrollment		Percent Cluster Enrollment			
	1969-70	1972-73	1969-70	1972-73		
VII-A-1	1000	1152	0.0	45.1	z	49.59**

**significant at 1% level.

TABLE OF RESULTS

TABLE VII

OBJECTIVE VII

	David Douglas		David Douglas		
			Percent Dropped Out		
Eval. Plan Ref.	Cluster Students	Non-Cluster Students	Cluster Students	Non-Cluster Students	Statistical Test Type/Result
VII-B-1	517	872	5.8	9.6	z -0.65

TABLES OF RESULTS

TABLE VIII

OBJECTIVE VII

Eval. Plan Ref.	No. of Students or Staff		Percent Passed		Statistical Test Type/Result	
	David Douglas	Control	David Douglas	Control		
VII-C-1	50	33	84.0	45.5	z	3.70**
VII-C-2i	94		86.2		Expected % 80.0	
VII-C-2ii (Mastery test evidence)	58		94.8		Expected % 80.0	
VII-C-2iii (No Mastery test evidence)	36		72.2		Expected % 80.0	
		**significant at 5% level.				

TABLE OF RESULTS

TABLE IX

OBJECTIVE VII

Eval. Plan Ref.	David Douglas Cluster Students Enrollment in CWE			Percent in CWE		
	1970-71	1971-72	1972-73	1970-71	1971-72	1972-73
VII-D-1	542	534	520	18.3	12.0	18.7

TABLES OF RESULTS

TABLE X

OBJECTIVE VIII

Eval. Plan Ref.	No. of Students or Staff		Percent Passed		Statistical Test Type/Result
	David Douglas	Control	David Douglas	Control	Expected %
VIII-A-1 VIII-A-2	26	26	76.9	65.4	100.00
VIII-B-1	10		100.0		Expected % 100.00
VIII-B-2	10		80.0		Expected % 100.00
VIII-B-3	10		100.0		Expected % 100.00
VIII-C-1	26		100.0		Expected % 100.00
VIII-C-2	65		100.0		Expected % 80.0

APPENDIX B

Document A - C

CAREER EDUCATION STUDENT SURVEY
Grade 3

Please answer the following questions:

1/ Why is there no one else like you in the world?

2/ What do you want to be later on in your life?

3/ Why did you pick that?

4/ How many jobs can you name? List them below.

5/ Pick any of the two jobs you just wrote down and tell how they are <u>different</u>.

Thank you very much.

Document A - E

CAREER EDUCATION STUDENT SURVEY
Grade 3

Please answer the following questions:

1/ Why is there no one else like you in the world?

2/ What do you want to be later on in your life?

3/ Why did you pick that?

4/ How many jobs can you name? List them below.

5/ Pick any of the two jobs you just wrote down and tell how they are <u>different</u>.

Thank you very much.

Document B - E

CAREER EDUCATION STUDENT SURVEY
Grade 6

Please answer the following questions:

1/ Name as many families of jobs (clusters) you would like to explore as you can.

2/ What is there about you that made you choose these families of jobs (clusters)?

3/ To which family of jobs (clusters) does the occupation of doctor relate?

4/ What is the service performed or product produced by someone who is a doctor?

5/ Can you remember some time when the counselor in your school worked with you (alone or with others in your class) about looking at jobs? YES_____ NO_____ If you said "Yes", please describe briefly what the counselor did.

Thank you very much.

Document B - C

CAREER EDUCATION STUDENT SURVEY

GRADE 6

Please answer the following questions:

1. Name as many families of jobs (clusters) you would like to explore as you can.

2. What is there about you that made you choose these families of jobs (clusters)?

3. To which family of jobs (clusters) does the occupation of doctor relate?

4. What is the service performed or product produced by someone who is a doctor?

5. Can you remember some time when the counselor in your school worked with you (alone or with others in your class) about looking at jobs?
YES_____ NO_____ If you said "Yes," please describe briefly what the counselor did.

Thank you very much.

Document C - E

CAREER EDUCATION STUDENT SURVEY
Grade 8

1/ What, briefly, do you plan to do during the next two years about your future career?

2/ What is there about you that made you answer the first question as you did?

Thank you very much.

Document D

CAREER EDUCATION STUDENT SURVEY

GRADE 8

1. What, briefly, do you plan to do during the next two years about your future career?

2. What is there about you that made you answer the first question as you did?

3. Have you spent at least five days outside your classroom either working on a job or watching how other people worked? YES_____ NO_____

4. What were the things you worked on or watched people working on when you spent these days outside your classroom?

5. Could you describe where you worked or watched others work?

   Street Address_____

   (If you can't remember the exact address, try to describe near where it is located. "115th between Halsey and Glisan" would be enough.)

Thank you very much.

Document E

Dan Dunham
Career Education
Oregon State Department of Education
942 Lancaster Drive NE
Salem, Oregon 97310

–Return This Portion–

Dear graduate. The following questionnaire is being given to a sample of 1972 graduates to help evaluate a program carried out by the Oregon State Department of Education. We would appreciate your filling out the information requested, detaching this portion of the stamped, self-addressed card, and mailing it back to us as quickly as possible. Thank you very much.

Please check one statement in each question that is most closely correct for you.

A. I am now mainly working full time _____
I am now mainly going to college (or community college) full time _____
I am now mainly doing both _____
I am now doing neither _____
I am now a homemaker _____

B. My high school studies were related very closely to what I am now doing _____
My high school studies were unrelated to what I am now doing _____

Document F

CAREER EDUCATION STAFF SURVEY

Dear Teacher: The following questionnaire is being given to a sample of teachers to help evaluate project VIGOR. We would appreciate your assistance by answering the following question:

Please describe below an activity which was coordinated by your building coordinator and which dealt primarily with career awareness.

Thank you very much for your cooperation.

Document G-S

CAREER EDUCATION STUDENT SURVEY

Dear Student: This questionnaire is being given to a sample of students in order to help us evaluate project VIGOR. Would you please help us by answering the following question:

Please describe briefly at least one example of your getting some assistance by a teacher or counselor in giving you some alternative choices while you were planning your program.

Thank you very much.

Document G-T

CAREER EDUCATION TEACHER SURVEY

Dear Teacher: This questionnaire is being given to a sample of teachers drawn at random in order to help us evaluate project VIGOR. Would you please help us by answering the following question:

Please describe briefly at least one example of your having given a student some kind of alternative choice as that student was planning his program.

Thank you very much for your cooperation.

Document H

CAREER EDUCATION STAFF SURVEY

Dear Teacher:

The following students were selected at random as pursuing your cluster. The information is being gathered for evaluation of project VIGOR.

Please consult your record book and determine the most recent data you have for a competency test given to your students for this cluster. Please determine if each of the students named has reached a level of 75 percent or not on this competency test.

By writing YES, it will indicate that the student has mastered at least the 75 percent level or higher on your mastery test. NO will indicate that the student has not mastered at least the 75 percent level on your mastery test.

Please submit a copy of the mastery test you have used by attaching it to this page.

Thank you for your cooperation.

NAME	75 PERCENT MASTERY?

Document J

CAREER EDUCATION STUDENT SURVEY

Dear Student:

We are doing an evaluation of the project that is going on in the David Douglas District. Your name was drawn at random as having had work experience. We would appreciate it if you would answer the following pair of questions:

1. Have you been offered a work experience while in this school?
   YES_____ NO_____

2. Where was the location of this work experience:

   Street Address _____

   (If you do not know the exact address, describe it to the best of your ability. "Halsey between 112th and 115th" is satisfactory.)

Thank you very much for your cooperation.

Document K

CAREER EDUCATION STAFF SURVEY

Dear Counselor:

We ask your cooperation in answering the following questions as part of the evaluation that is being done of the effects of project VIGOR.

Please note that you are not required to identify yourself in any way. And since this questionnaire is being administered by a neutral party, none of your answers will be able to be identified.

On the next page, you will find 12 columns. In each column we would like you to fill in the following:

Upper Block--Name at least nine clusters that are being offered at David Douglas High School. (Please name as many as you can, writing its name in a different upper block each time)

Middle Block--Please list at least five occupations represented by that cluster.

Lower Block--Please list at least one employment opportunity trend in the area of that cluster.

Please do this from memory. Please do not seek help from each other. Please accept our thanks for your cooperation.

Cluster Name	Occupations in Cluster	Employment Opportunity Trend

Appendix C

Appendix C

Limitations of the Evaluation

The annual and three-year evaluations reported in Sections I and II were limited by two primary factors:

1. Planning for the 1972-73 (annual) and 1970-73 (three-year) evaluations did not begin until December, 1972, or nearly half-way through the third year of the project. This late start is primarily attributable to the lack of time availability during the fall months on the part of the evaluation team. The evaluators intentions had been to begin planning and design of the annual and three-year evaluations early in the final project year (July or August, 1972). However, the usual problems of asking busy people to reallocate time and adjust primary work priorities befell the initial effort.

One particular result is noteworthy. The State Department staff team members agreed, upon completion of the evaluation, that they would not recommend that future efforts of this type be undertaken by the Department, that is, contracting as a third-party evaluator. Rather, they agreed, such efforts should be channeled to assisting districts and projects with on-going, formative assessment and evaluation planning and conduct. The time requirements are too great for an already busy group of professionals to be able to assign the kinds of time and work priorities necessary to complete the task in a manner consistent with those used to complete regular duties and assignments. Moreover, there was a certain amount of inherent "lack of objectivity" which tended to constrain the team members in responding in a true "third-party" fashion to a project with which some of them had worked during the previous years in roles other than evaluators.

2. The most important limitation in working on this project was imposed by the lack of a carefully drawn evaluation plan in the project proposal or subsequent documents. Although the team did expend considerable effort to design a tight and useful plan for the final year's evaluation, this design was not taken from the context of an initial evaluation plan in the original proposal. Perhaps the case for initial pre-project evaluation planning and design can best be summed up in the following statement. The "ATP" project is a fictional title, to protect the integrity and identity of the project for which this statement was written, which, by the way, is a real project, currently underway in another area of the country.

Interim Report on Evaluation of "ATP"

("A Typical Project")

The ATP project has failed. It is not because of a lack of contribution to the furtherance of career education that it has failed, for it has surely had its impact, but rather because it has produced no hard data which will (1) identify level of achievement; (2) aid in planning future career education ventures; (3) allow the transport of important advancements for replication elsewhere; and, (4) guide project personnel in its completion.

ATP failed because it lacked the support of a properly constructed evaluation plan. For want of a plan, important data were not collected; for want of data, advancements are lost because they cannot be reconstructed and recorded; and, for want of advancements, the project has failed.

Evaluations are generally conducted for the purpose of measuring achievement. When constructed properly, the evaluation will indicate level of achievement and produce planning data on which all can rely. When constructed improperly, or not at all, the project will be termed a success, with no evidence to support or deny this contention, and the evaluation will only rarely produce planning data which are reliable.

ATP did not have a properly constructed evaluation plan. The result is that, to date, the project has been termed a success and, since there are no data to the contrary, and since project personnel view it that way, it is so judged.

But it is not a success, it is a failure.

The monies expended thus far for an evaluation of ATP have failed to produce the desired result. Empirically, the monies have been wasted, although there is bound to be some value in any well-intentioned effort. The fact remains, that an evaluation was called for and not produced. ATP is not atypical in its evaluative efforts. Projects such as this have all suffered from an evaluation conducted "after the fact." It is not intended that evaluations be conducted in this manner, but it happens--and it happens because projects are allowed to begin without having a properly constructed evaluation plan under which achievement may be measured and reliable planning data collected.

To attempt construction of an evaluation plan after the project has begun is folly. In most cases, proposed project objectives are not written in precise, measurable terms and, therefore, require rewriting. Since project personnel are heavily involved in administering the project, rewriting objectives loses all importance. What is the saying which gained such popularity in recent years--"It is hard to remember that the objective was to drain the swamp, when you are up to your posteriors in alligators." A properly constructed evaluation plan would have reminded this mythical administrator that it was time to drain the swamp in order to avoid being caught up to his posterior in alligators.

To avoid evaluation "after the fact," the funding agency should have reviewed and approved a project evaluation plan before funds were awarded. Once a project is judged fundable, an outside evaluation team or third party evaluator should meet with project personnel to:

1. insure that project objectives are written in precise, measurable terms;

2. design evaluative techniques and instruments which will insure the collection of reliable data from the beginning of the project:

3. establish mutually agreeable means for having the project monitored:

4. schedule times during the project when the evaluators and project personnel can meet for interim or "formative" evaluation sessions.

Finally, the funding agency should name the evaluation team. Evaluation personnel identified in the proposal by project designers usually have either participated in the construction of the proposal or have been long time associates of the project personnel.

In either case, they are rarely without a vested interst which may reduce their objectivity rating significantly.

The investment of man-hours to construct an evaluation plan prior to the beginning of a project will result in an overall reduction of man-hours expended for the purpose of evaluation.

No evaluator desirous of doing a professional job can condone the method of evaluation which is so prevalent in projects today. And, no funding agency should condone it by allowing it to continue. To allow continuance will surely result in a less than professional evaluation by less than professional evaluators.

APPENDIX D

PROPOSAL
for
THIRD PARTY EVALUATION

PROPOSAL

for

THIRD PARTY EVALUATION

of

Project V.I.G.O.R.

An Exemplary Project in Vocational Education
Conducted Under Part D
Public Law 90-576
Project No. 0-361-0055
Contract No. OEG-0-70-5187 (361)

by

David Douglas Public Schools

Proposal Submitted by

APPLIED RESEARCH
(RESEARCH COORDINATING UNIT)
Career Education
Oregon Board of Education
September 6, 1972

PROPOSAL FOR THIRD PARTY EVALUATION OF THE DAVID DOUGLAS "PROJECT VIGOR" PART D - EXEMPLARY PROJECT

A. The Oregon Board of Education, Career Education Division-Applied Research Section, - (Research Coordinating Unit) proposes to provide the final annual and total project third party (outside) evaluations of Project VIGOR. The evaluations will be performed for two time periods: 1) annual evaluation of the final project year (school year 1972-73) 2) final evaluation of the total three-year project (1970-1973).

B. Major dimensions of the evaluation will include the following:

1. Assessment of quality of educational products and materials produced, including course content, guides, audio-visual materials, etc.
2. Impact of the project on the school system.
3. Identification of objective indicators of student performance and/or achievement at four levels:

   a. Elementary career awareness, grades 1-6.
   b. Middle school career exploration, grades 7-8.
   c. Junior high career exploration, grades 9-10.
   d. Senior high vocational-occupational preparation, grades 11-12.

4. Assessment of specific current year efforts and programs of career exploration, namely:

   a. Project GOAL
   b. Occupational exploration "Cruise" program
   c. Junior building Career Guidance Resource center.

5. Assessment of student achievement and/or performance, using objective indicators of performance, for each of the above levels.
6. Assessment of changes in teacher roles, responsibilities, attitudes and knowledge of career education (using 1971-72 annual evaluation as baseline).
7. Assessment of administrator roles, responsibilities, attitudes, and knowledge of career education (using 1971-72 annual evaluation as baseline).

8. Provide objective process and output data and information for the following project VIGOR components (as per the original project proposal) not covered in the foregoing evaluation dimensions:

   a. Component 10, Vocational Exploration, grades 7-8.
   b. Component 20, Vocational Guidance, grades 1-14.
   c. Component 30, Relevancy of the general curriculum.
   d. Component 40, Vocational Cluster Program, grades 11-12.
   e. Component 50, Work Experience
   f. Component 60, Program Articulation, grades 1-14.

C. Basic elements of the evaluation design will include the following assessment components to produce information for effective decision making based on evidence of accomplishment of program objectives:

   1. Context and input evaluation-verify and clarify program goals and objectives at all levels and by each administrative, teacher, counselor, and student category.
   2. Establish evaluation perspective-identify assessment levels and establish evaluation purpose for each level according to the plan described above.
   3. Evaluation description-determine evaluation requirements, timing, format.
   4. Establish feasibility and credibility of the design.
   5. Implementation of the evaluation-initiate the plan, accumulate data and information, interpret and prepare reports.
   6. Evaluation-compare observed outcomes with intended outcomes, reach conclusions, render judgments.

D. A major dimension of the 1972-73 school year evaluation and of the three-year project evaluation will be the design, testing and implementation of student-based data collection instruments at selected grade levels. A special effort of the evaluation will be the identification of objective indicators of performance for both student outcomes and project progress in general. Such indicators will be identified cooperatively between the third-party evaluator and the Project administration and staff members.

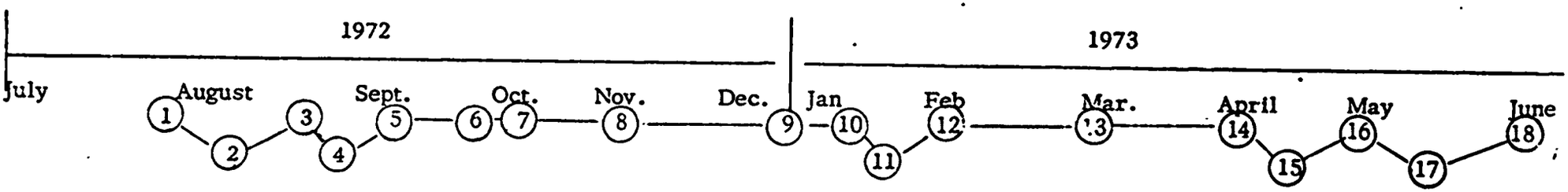
B. Terms and Conditions of the Evaluation Contract

1. The evaluation contract will cover the period July 1, 1972, through June 30, 1973. A tentative time line of major evaluation activities is attached.
2. This contract proposal is for the David Douglas Project VIGOR, Office of Education Grant Number: OEG-0-70-5187 (361) Project No. 0-361-0055; an exemplary project in vocational education conducted under Part D of Public Law 90-576.
3. Evaluation will be conducted by the Applied Research section, (Research Coordinating Unit) of the Career Education Division, Oregon Board of Education. The evaluation project coordinator will be Dr. Dan Dunham, Coordinator of Applied Research. Other Oregon Board of Education personnel directly involved in the evaluation will include: Don Gilles, Coordinator, Program Development and Evaluation; Tom Williams, Specialist, Exploratory Programs; Curt Rehn, Specialist, Applied Research, and other staff specialists from the Oregon Board of Education.
4. In addition to the above personnel, certain individuals possessing expertise in specific aspects of evaluation, including statistical design, data synthesis and interpretation, test instrument development, etc., will be contracted by the third party evaluator.
5. A proposed budget for the evaluation contract totaling $6925.00 is attached.

Proposed Timeline of Major Evaluation Activities

Project VIGOR Evaluation

Annual (1972-3) and three year (1970-3)



1. Submit proposal; review w/VIGOR staff.
2. Complete contract.
3. Conduct context-input evaluation steps for annual and 3-year phases.
4. Develop student-based assessment instruments-objective indicators base.
5. Conduct student pre-tests.
6. Develop staff assessment instruments.
7. Conduct selected staff interviews.
8. Compile & interpret initial student & staff information.
9. Collect information and data on first semester projects and activities.
10. Develop interim assessment reports.
11. Conduct mid-year student testing.
12. Conduct additional staff interviews.
13. Compile, interpret current data & information.
14. Conduct student post-testing
15. Complete remaining data and information collection.
16. Prepare final annual evaluation report.
17. Prepare final 3-year project evaluation report
18. Submit final reports June 15, 1973

PROPOSED BUDGET DAVID DOUGLAS PROJECT VIGOR EVALUATION

Budget Category	Evaluation Component	STAFF			Total	OBE Staff (In Kind)
		Consultants	Evaluation	PROJECT VIGOR		
PERSONNEL				(In - Kind)		
	1. Context & Input Eval.	$500	$ 575	($ 750)	$ 1075	($ 550)
	2. Evaluation Description	400	375	(225)	775	(350)
	3. Implementation					
	a. Test & Instrument Development	825	475	(1100)	1300	(1200)
	b. Data accumulation	350	750	(1200)	1100	(900)
	c. Interpret data	525	400		925	(300)
	d. Prepare reports	250	550		800	
	SUB TOTAL	2850	3125		5975	(3300)
TRAVEL		250			250	(300)
COMMUNICATIONS		125			125	(150)
SERVICES & SUPPLIES						
	Printing - Forms, tests, etc.		300		300	
	- Reports		275		275	
	SUB TOTAL	375	575		950	(450)
	GRAND TOTALS	$ 3225	$3700	($3275)	$6925	($ 3750)

APPENDIX E

PRELIMINARY FOLLOW-UP
Seniors 1972

PRELIMINARY FOLLOW-UP

Seniors '72

On May 8, 1972, a Preliminary Follow-up Form was given in the Senior Reg Rooms at David Douglas High School to all seniors present. The Survey Forms had been delivered personally to all Reg Room teachers with an instruction sheet on May 4, 1972. On May 8, Survey Forms were mailed to early-graduation Juniors and to Seniors who did not have Reg Rooms. On May 12, Survey Forms were mailed to all those Seniors who had been absent the day the Survey was administered. Mailed Survey Forms were accompanied by a letter from Mr. Miller, the High School Principal, explaining the purpose of the Survey.

The Preliminary Follow-up Survey was given for three main reasons:

1) To obtain permanent addresses on all Seniors for later Follow-up mailings.
2) To obtain information on what activities students thought they would be engaged in after graduation.
3) To obtain students' ideas and opinions on their high school experiences.

The results of the Survey were compiled by computer and by hand. When examining the Survey results, it must be kept in mind that they are predictions and opinions of the students surveyed. The actual activities of last year's graduates will not be known until these students are surveyed again in January, 1973.

Jana Jennings
Student Follow-up Coordinator
David Douglas Schools

PRELIMINARY FOLLOW-UP

Seniors '72
Survey Results

490 students, approximately 70% of the class of 1972 at David Douglas High School, responded to the senior survey. 117 of these students had taken a Career Cluster Class at David Douglas. Results of the survey are as follows:

1. WHAT DO YOU EXPECT TO BE DOING THIS FALL?

ACTIVITY EXPECTED	#	%
School Only[1].	236	48
Work Only[2].	85	17
Military Only	18	4
School and Work [1.2].	105	21
School and Military[1].	3	1
Housewife Only	3	1
Housewife and Work[2].	20	5
Housewife and School[1].	4	1
Housewife and School and Work[1.2].	5	1
Other	9	2
No Response	3	1
TOTALS	490	100

1. Total students expecting to attend school only or in combination with other activities - 351 - 72%.
2. Total students expecting to work only or in combination with other activities - 211 - 43%.

Those students anticipating college expected to attend these schools:

SCHOOL	#	%
Mt. Hood Community College	155	44
Portland State University	39	11
Oregon State University	21	6
University of Oregon	16	5
Others	120	34
TOTALS	351	100

4. HAVE YOU TAKEN A CLUSTER COURSE IN HIGH SCHOOL?

Responses were as follows:

	#	%
Yes	117	24
No	373	76
TOTALS	490	100

WHICH ONE?

Those students who replied "Yes" to the above question were enrolled in the following clusters:

CLUSTER	# SENIOR STUDENTS RESPONDING	# SENIOR STUDENTS ENROLLED
Model Office	34	53
Industrial Mechanics	21	52
Diversified Occupations	17	23
Child Services	14	15
Health Occupations	13	13
Food Services	11	19
Industrial Electronics	6	6
Industrial Metals	1	6
TOTALS	117	183

5. WHICH OF THE SOURCES ON THE LIST BELOW GAVE YOU THE MOST HELP IN PLANNING FOR YOUR EDUCATION? (selection of courses, plans for college, etc.)

6. WHICH OF THESE SOURCES GAVE YOU THE MOST HELP IN PLANNING FOR YOUR OCCUPATION?

Students could check as many or as few of the nine possible sources listed as they wished. Results were as follows:

6. con't.

SOURCES	CHECKED BY — % OF RESPONDENTS: EDUCATIONAL PLANNING #	EDUCATIONAL PLANNING %	OCCUPATIONAL PLANNING %	OCCUPATIONAL PLANNING #
Counselor	127	26	14	69
Friends	111	23	11	52
Parents	178	36	22	107
Reading Materials	88	18	13	63
Relatives	34	7	4	19
Teacher	80	16	13	66
Yourself	305	62	61	301
Cluster Class	46	9	10	49
Other	28	6	7	32

7. WHAT KIND OF TRAINING AND/OR EDUCATION DO YOU THINK YOU'LL NEED TO PREPARE YOU FOR YOUR FIRST CHOICE OCCUPATION?

Many students checked more than one response to this question. The responses were as follows:

TYPES OF TRAINING/EDUCATION	CHECKED BY — % RESPONDENTS #	%
Private Technical, Trade School	61	12
Apprenticeship Program	21	4
Community College Degree	95	19
4-Year College Degree	165	34
Master or Doctoral Program	63	13
Military Training	17	3
On-The-Job Training	119	24
No Training Needed	17	3
Other	28	6

8. IF YOU ARE 18 YEARS OF AGE OR OLDER, HAVE YOU REGISTERED TO VOTE?

	CHECKED BY — % RESPONDENTS #	%
Yes	232	52
Not Yet, But I Plan To	31	7
No, I Don't Plan To	11	2
I Am Not 18	172	39

9. HOW DID HIGH SCHOOL EXPERIENCES HELP YOU

	CHECKED BY —% RESPONDENTS					
	MUCH HELP		SOME HELP		LITTLE OR NO	
	#	%	#	%	#	%
Plan Your Courses of Study	90	19	281	60	101	21
Look For A Job	69	15	134	28	272	57
Take Advantage School Activ.	88	19	174	37	209	44
Learn About Yourself	130	27	230	48	116	24
Plan For Your Career	87	18	219	46	170	36
Learn Solve Personal Probls.	34	7	179	38	256	55
Prepare For College	130	28	205	44	133	28
Learn to Appreciate Art, etc.	128	27	150	32	192	41
Plan Personal Finance	55	12	140	30	269	58

10. DO YOU HAVE ANY SUGGESTIONS AS TO HOW WE CAN MAKE HIGH SCHOOL A MORE RELEVANT AND HELPFUL EXPERIENCE FOR STUDENTS? (consider classes, guidance services, activities, etc.)

See Appendix II for comments selected from the Senior '72 Follow-up Surveys. These particular comments were selected because they were judged to be representative, exceedingly well thought-out, and/or especially sincere. Minor corrections in punctuation and spelling were made on the typed comments for the sake of clarity. Otherwise, the comments are quoted verbatim and in their entirety.

APPENDIX F

CAREER AWARENESS PROGRAMS

CHERRY PARK ELEMENTARY SCHOOL - approximately 380 students

Slides are available of the various career education projects in the Cherry Park school. A video tape of the communications unit produced by the fourth graders is also available. The following is an example of the career awareness activities taking place in the school.

1st Grade	-	Family Unit
		Food Unit
		Post Office
		Community and School Workers
2nd Grade	-	Policeman, Postman and Weatherman
		Dairy Unit
		Food Services
		Career in Crafts Unit
		Fireman's Occupation
		Careers in Drama
3rd Grade	-	Sewing Unit
		Food Services
		Construction Unit
4th Grade	-	Bakery Unit
		Communications Unit
		Construction Unit - interior design
		Newspaper Unit
		Careers in Sports
5th Grade	-	Food Services
6th Grade	-	Unit on Grooming (Beauty Shop & Food Service)
		Workers on Elections
		Drug Unit
		Law Enforcement
All Grades	-	Music Careers
		Art Careers

Cherry Park's career awareness program is representative of those programs going on in the ten elementary schools in the David Douglas School District.

APPENDIX G

STUDENT JOB CENTER

THE DAVID DOUGLAS HIGH SCHOOL

STUDENT JOB CENTER

The Job Center is located adjacent to the project office making a phone extension available to the students in charge.

Incoming inquiries from possible employers are handled by Diversified Occupation students operating the center from 11:30 A.M. til 3:00 P.M. daily.

Students both in school, grade 9 - 12, and out of school are encouraged to register with the center. When prospective employers call, the information is recorded and registered students' interests are matched with job requirements. These students are then sent on job interviews.

Mrs. Clarice Roehm, Diversified Occupations instructor, and Mr. Pat Cline, Work Experience Coordinator, are the advisors for the center.

The center was handled by a total of 11 students. They processed 439 calls - recording in excess of 600 possible jobs. 623 students were interviewed and 208 students were placed in jobs that ranged from 1-2 hour baby sitting and one time lawn jobs to part time jobs that are resulting in full time summer employment.

The Job Center has been a successful operation for student placement.

23MAY73
PC:jr

APPENDIX H

AN EXAMPLE OF ARTICULATION ACTIVITY

AN EXAMPLE OF ARTICULATION ACTIVITY

The Health Services program is changing almost daily, due to advancement in space and medical technology. It is important, for this reason, that articulation play a major role in program planning. Secondary personnel activity in state committees, periodic workshops and visitations to other programs will greatly enhance this inter-relationship.

Articulation is necessary to prevent unneeded repetition of material on the program ladder.

It is true that repetition is necessary, but only if education continues. By working as a part of the Oregon Health Occupations Association, we are able to communicate and share with secondary and post secondary vocational and/or professional programs. Through these efforts we are combining knowledge and expertise to prevent unneeded repetitions and are using the challenge system to expedite the trip up the career ladder.

By close contact and cooperation we are able to utilize the work experience stations in the community to their utmost with little or no friction.